



ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

AIR QUALITY CLASS I PERMIT

COMPANY: *Apache Nitrogen Products Inc.*
FACILITY: *Apache Nitrogen*
PERMIT #: *42704*
DATE ISSUED: *Draft*
EXPIRY DATE:

SUMMARY

This Title V permit is a renewal of Operating Permit Number 1000038, issued to Apache Nitrogen Products, Inc., the Permittee, for the operation of their nitric acid, liquid ammonium nitrate and ammonium nitrate prill plants located in St. David in Cochise County.

The potential emission rates of nitrogen oxides (NO_x) and particulate matter less than 10 microns (PM₁₀) for the facility are 366.43 tons per year and 215.55 tons per year, respectively. As the nitric acid plant is a categorical source as per A.A.C. R18-2-101.64 and the potential emissions of nitrogen oxides (NO_x) and PM₁₀ are greater than 100 tons per year, the facility is considered a major source. Also, the facility is a categorical major source as defined under Arizona Administrative Code (A.A.C.) R18-2-401, for the purposes of the Prevention of Significant Deterioration program.

This permit is issued in accordance with Title 49, Chapter 3 of the Arizona Revised Statutes. All definitions, terms, and conditions used in this permit conform to those in the Arizona Administrative Code (A.A.C.) R18-2-101 et. seq. and Title 40, Code of Federal Regulations (CFR), except as otherwise defined in this permit. Unless noted otherwise, references cited in the permit conditions refer to the A.A.C. All material permit conditions have been identified within the permit by underline and italics. All terms and conditions in this permit are enforceable by the Administrator of the United States Environmental Protection Agency (U.S. EPA).

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ATTACHMENT “A”: GENERAL PROVISIONS

**Air Quality Control Permit No. 42704
For
*Apache Nitrogen Products, Inc.***

- I. PERMIT EXPIRATION AND RENEWAL** [ARS § 49-426.F, A.A.C. R18-2-304.C.2, and -306.A.1]
- A.** This permit is valid for a period of five years from the date of issuance.
- B.** The Permittee shall submit an application for renewal of this permit at least 6 months, but not more than 18 months, prior to the date of permit expiration.
- II. COMPLIANCE WITH PERMIT CONDITIONS** [A.A.C. R18-2-306.A.8.a and b]
- A.** The Permittee shall comply with all conditions of this permit including all applicable requirements of the Arizona air quality statutes and air quality rules. Any permit noncompliance constitutes a violation of the Arizona Revised Statutes and is grounds for enforcement action; for permit termination, revocation and reissuance, or revision; or for denial of a permit renewal application. In addition, noncompliance with any federally enforceable requirement constitutes a violation of the Clean Air Act.
- B.** It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- III. PERMIT REVISION, REOPENING, REVOCATION AND REISSUANCE, OR TERMINATION FOR CAUSE** [A.A.C. R18-2-306.A.8.c, -321.A.1, and -321.A.2]
- A.** The permit may be revised, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a permit revision, revocation and reissuance, termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.
- The permit shall be reopened and revised under any of the following circumstances
1. Additional applicable requirements under the Clean Air Act become applicable to the Class I source. Such a reopening shall only occur if there are three or more years remaining in the permit term. The reopening shall be completed no later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless an application for renewal has been submitted pursuant to A.A.C. R18-2-322.B. Any permit revision required pursuant to this subparagraph shall comply with the provisions in A.A.C. R18-2-322 for permit renewal and shall reset the five-year permit term.
 2. Additional requirements, including excess emissions requirements, become applicable to an affected source under the acid rain program. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the Class I permit.
 3. The Director or the Administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

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4. The Director or the Administrator determines that the permit needs to be revised or revoked to assure compliance with the applicable requirements.

- B. Proceedings to reopen and reissue a permit, including appeal of any final action relating to a permit reopening, shall follow the same procedures as apply to initial permit issuance and shall, except for reopenings under Condition III.B.1 above, affect only those parts of the permit for which cause to reopen exists. Such reopenings shall be made as expeditiously as practicable. Permit reopenings for reasons other than those stated in Condition III.B.1 above shall not result in a resetting of the five-year permit term.

IV. POSTING OF PERMIT

[A.A.C. R18-2-315]

- A. The Permittee shall post this permit or a certificate of permit issuance where the facility is located in such a manner as to be clearly visible and accessible. All equipment covered by this permit shall be clearly marked with one of the following:
 1. Current permit number; or
 2. Serial number or other equipment ID number that is also listed in the permit to identify that piece of equipment.
- B. A copy of the complete permit shall be kept on site.

V. FEE PAYMENT

[A.A.C. R18-2-306.A.9 and -326]

The Permittee shall pay fees to the Director pursuant to ARS § 49-426(E) and A.A.C. R18-2-326.

VI. ANNUAL EMISSION INVENTORY QUESTIONNAIRE

[A.A.C. R18-2-327.A and B]

- A. The Permittee shall complete and submit to the Director an annual emissions inventory questionnaire. The questionnaire is due by March 31st or ninety days after the Director makes the inventory form available each year, whichever occurs later, and shall include emission information for the previous calendar year.
- B. The questionnaire shall be on a form provided by the Director and shall include the information required by A.A.C. R18-2-327.

VII. COMPLIANCE CERTIFICATION

[A.A.C. R18-2-309.2.a, -309.2.c-d, and -309.5.d]

- A. The Permittee shall submit a compliance certification to the Director semiannually, which describes the compliance status of the source with respect to each permit condition. The first certification shall be submitted no later than May 15th, and shall report the compliance status of the source during the period between October 1st of the previous year and March 31st of the current year. The second certification shall be submitted no later than November 15th, and shall report the compliance status of the source during the period between April 1st and September 30th of the current year.

The compliance certifications shall include the following:

1. Identification of each term or condition of the permit that is the basis of the certification;
2. Identification of the methods or other means used by the Permittee for determining the

compliance status with each term and condition during the certification period,

3. The status of compliance with the terms and conditions of the permit for the period covered by the certification, including whether compliance during the period was continuous or intermittent. The certification shall be based on the methods or means designated in Condition VII.A.2 above. The certifications shall identify each deviation and take it into account for consideration in the compliance certification;
 4. For emission units subject to 40 CFR Part 64, the certification shall also identify as possible exceptions to compliance any period during which compliance is required and in which an excursion or exceedance defined under 40 CFR Part 64 occurred;
 5. All instances of deviations from permit requirements reported pursuant to Condition XII.B of this Attachment; and
 6. Other facts the Director may require to determine the compliance status of the source.
- B.** A copy of all compliance certifications shall also be submitted to the EPA Administrator.
- C.** If any outstanding compliance schedule exists, a progress report shall be submitted with the semi-annual compliance certifications required in Condition VII.A above.

VIII. CERTIFICATION OF TRUTH, ACCURACY AND COMPLETENESS

[A.A.C. R18-2-304.H]

Any document required to be submitted by this permit, including reports, shall contain a certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

IX. INSPECTION AND ENTRY

[A.A.C. R18-2-309.4]

Upon presentation of proper credentials, the Permittee shall allow the Director or the authorized representative of the Director to:

- A.** Enter upon the Permittee's premises where a source is located, emissions-related activity is conducted, or where records are required to be kept under the conditions of the permit;
- B.** Have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;
- C.** Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;
- D.** Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or other applicable requirements; and
- E.** Record any inspection by use of written, electronic, magnetic and photographic media.

X. PERMIT REVISION PURSUANT TO FEDERAL HAZARDOUS AIR POLLUTANT STANDARD

[A.A.C. R18-2-304.C]

If this source becomes subject to a standard promulgated by the Administrator pursuant to Section 112(d) of the Act, then the Permittee shall, within twelve months of the date on which the standard is

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promulgated, submit an application for a permit revision demonstrating how the source will comply with the standard.

XI. ACCIDENTAL RELEASE PROGRAM

[40 CFR Part 68]

If this source becomes subject to the provisions of 40 CFR Part 68, then the Permittee shall comply with these provisions according to the time line specified in 40 CFR Part 68.

XII. EXCESS EMISSIONS, PERMIT DEVIATIONS, AND EMERGENCY REPORTING

A. Excess Emissions Reporting

[A.A.C. R18-2-310.01.A and -310.01.B]

1. Excess emissions shall be reported as follows:
 - a. The Permittee shall report to the Director any emissions in excess of the limits established by this permit. Such report shall be in two parts as specified below:
 - (1) Notification by telephone or facsimile within 24 hours of the time when the Permittee first learned of the occurrence of excess emissions including all available information from Condition XII.A.1.b below.
 - (2) Detailed written notification by submission of an excess emissions report within 72 hours of the notification pursuant to Condition XII.A.1.a.(1) above.
 - b. The report shall contain the following information:
 - (1) Identity of each stack or other emission point where the excess emissions occurred;
 - (2) Magnitude of the excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions;
 - (3) Date, time and duration, or expected duration, of the excess emissions;
 - (4) Identity of the equipment from which the excess emissions emanated;
 - (5) Nature and cause of such emissions;
 - (6) If the excess emissions were the result of a malfunction, steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunctions; and
 - (7) Steps taken to limit the excess emissions. If the excess emissions resulted from start-up or malfunction, the report shall contain a list of the steps taken to comply with the permit procedures.
2. In the case of continuous or recurring excess emissions, the notification requirements of this section shall be satisfied if the source provides the required notification after excess emissions are first detected and includes in such notification an estimate of the time the excess emissions will continue. Excess emissions occurring after the estimated time period, or changes in the nature of the emissions as originally reported, shall require additional notification pursuant to Condition XII.A.1 above. [A.A.C. R18-2-310.01.C]

B. Permit Deviations Reporting

[A.A.C. R18-2-306.A.5.b]

The Permittee shall promptly report deviations from permit requirements, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken. Prompt reporting shall mean that the report was submitted to the Director by certified mail, facsimile, or hand delivery within two working days of the time when emission limitations were exceeded due to an emergency or within two working days of the time when the owner or operator first learned of the occurrence of a deviation from a permit requirement.

C. Emergency Provision

[A.A.C. R18-2-306.E]

1. An “emergency” means any situation arising from sudden and reasonable unforeseeable events beyond the control of the source, including acts of God, that require immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.
2. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if Condition XII.C.3 is met.
3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - a. An emergency occurred and that the Permittee can identify the cause(s) of the emergency;
 - b. The permitted facility was being properly operated at the time;
 - c. During the period of the emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and
 - d. The Permittee submitted notice of the emergency to the Director by certified mail, facsimile, or hand delivery within two working days of the time when emission limitations were exceeded due to the emergency. This notice shall contain a description of the emergency, any steps taken to mitigate emissions, and corrective action taken.
4. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
5. This provision is in addition to any emergency or upset provision contained in any applicable requirement.

D. Compliance Schedule

[ARS § 49-426.I.5]

For any excess emission or permit deviation that cannot be corrected within 72 hours, the Permittee is required to submit a compliance schedule to the Director within 21 days of such occurrence. The compliance schedule shall include a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance with the permit terms or conditions that have been violated.

E. Affirmative Defenses for Excess Emissions Due to Malfunctions, Startup, and Shutdown

[A.A.C. R18-2-310]

1. Applicability

This rule establishes affirmative defenses for certain emissions in excess of an emission standard or limitation and applies to all emission standards or limitations except for standards or limitations:

- a. Promulgated pursuant to Sections 111 or 112 of the Act;
- b. Promulgated pursuant to Titles IV or VI of the Clean Air Act;
- c. Contained in any Prevention of Significant Deterioration (PSD) or New Source Review (NSR) permit issued by the U.S. EPA;
- d. Contained in A.A.C. R18-2-715.F; or
- e. Included in a permit to meet the requirements of A.A.C. R18-2-406.A.5.

2. Affirmative Defense for Malfunctions

Emissions in excess of an applicable emission limitation due to malfunction shall constitute a violation. When emissions in excess of an applicable emission limitation are due to a malfunction, the Permittee has an affirmative defense to a civil or administrative enforcement proceeding based on that violation, other than a judicial action seeking injunctive relief, if the Permittee has complied with the reporting requirements of A.A.C. R18-2-310.01 and has demonstrated all of the following:

- a. The excess emissions resulted from a sudden and unavoidable breakdown of process equipment or air pollution control equipment beyond the reasonable control of the Permittee;
- b. The air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good practice for minimizing emissions;
- c. If repairs were required, the repairs were made in an expeditious fashion when the applicable emission limitations were being exceeded. Off-shift labor and overtime were utilized where practicable to ensure that the repairs were made as expeditiously as possible. If off-shift labor and overtime were not utilized, the Permittee satisfactorily demonstrated that the measures were impracticable;
- d. The amount and duration of the excess emissions (including any bypass operation) were minimized to the maximum extent practicable during periods of such emissions;
- e. All reasonable steps were taken to minimize the impact of the excess emissions on ambient air quality;
- f. The excess emissions were not part of a recurring pattern indicative of inadequate design, operation, or maintenance;
- g. During the period of excess emissions there were no exceedances of the relevant ambient air quality standards established in Title 18, Chapter 2, Article 2 of the

Arizona Administrative Code that could be attributed to the emitting source;

- h. The excess emissions did not stem from any activity or event that could have been foreseen and avoided, or planned, and could not have been avoided by better operations and maintenance practices;
- i. All emissions monitoring systems were kept in operation if at all practicable; and
- j. The Permittee's actions in response to the excess emissions were documented by contemporaneous records

3. Affirmative Defense for Startup and Shutdown

- a. Except as provided in Condition XII.E.3.b below, and unless otherwise provided for in the applicable requirement, emissions in excess of an applicable emission limitation due to startup and shutdown shall constitute a violation. When emissions in excess of an applicable emission limitation are due to startup and shutdown, the Permittee has an affirmative defense to a civil or administrative enforcement proceeding based on that violation, other than a judicial action seeking injunctive relief, if the Permittee has complied with the reporting requirements of A.A.C. R18-2-310.01 and has demonstrated all of the following:
 - (1) The excess emissions could not have been prevented through careful and prudent planning and design;
 - (2) If the excess emissions were the result of a bypass of control equipment, the bypass was unavoidable to prevent loss of life, personal injury, or severe damage to air pollution control equipment, production equipment, or other property;
 - (3) The air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good practice for minimizing emissions;
 - (4) The amount and duration of the excess emissions (including any bypass operation) were minimized to the maximum extent practicable during periods of such emissions;
 - (5) All reasonable steps were taken to minimize the impact of the excess emissions on ambient air quality;
 - (6) During the period of excess emissions there were no exceedances of the relevant ambient air quality standards established in Title 18, Chapter 2, Article 2 of the Arizona Administrative Code that could be attributed to the emitting source;
 - (7) All emissions monitoring systems were kept in operation if at all practicable; and
 - (8) Contemporaneous records documented the Permittee's actions in response to the excess emissions.
- b. If excess emissions occur due to a malfunction during routine startup and shutdown, then those instances shall be treated as other malfunctions subject to

Condition XII.E.2 above.

4. Affirmative Defense for Malfunctions during Scheduled Maintenance

If excess emissions occur due to a malfunction during scheduled maintenance, then those instances will be treated as other malfunctions subject to Condition XII.E.2 above.

5. Demonstration of Reasonable and Practicable Measures

For an affirmative defense under Condition XII.E.2 or XII.E.3 above, the Permittee shall demonstrate, through submission of the data and information required by Condition XII.E and A.A.C. R18-2-310.01, that all reasonable and practicable measures within the Permittee's control were implemented to prevent the occurrence of the excess emissions.

XIII. RECORD KEEPING REQUIREMENTS

[A.A.C. R18-2-306.A.4]

A. The Permittee shall keep records of all required monitoring information including, but not limited to, the following:

1. The date, place as defined in the permit, and time of sampling or measurements;
2. The date(s) analyses were performed;
3. The name of the company or entity that performed the analyses;
4. A description of the analytical techniques or methods used;
5. The results of such analyses; and
6. The operating conditions as existing at the time of sampling or measurement.

B. The Permittee shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings or other data recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

C. All required records shall be maintained either in an unchangeable electronic format or in a handwritten logbook utilizing indelible ink.

XIV. REPORTING REQUIREMENTS

[A.A.C. R18-2-306.A.5.a]

The Permittee shall submit the following reports:

A. Compliance certifications in accordance with Section VII of Attachment "A".

B. Excess emission; permit deviation, and emergency reports in accordance with Section XII of Attachment "A".

C. Other reports required by any condition of Attachment "B".

XV. DUTY TO PROVIDE INFORMATION

[A.A.C. R18-2-304.G and -306.A.8.e]

- A. The Permittee shall furnish to the Director, within a reasonable time, any information that the Director may request in writing to determine whether cause exists for revising, revoking and reissuing, or terminating the permit, or to determine compliance with the permit. Upon request, the Permittee shall also furnish to the Director copies of records required to be kept by the permit. For information claimed to be confidential, the Permittee shall furnish an additional copy of such records directly to the Administrator along with a claim of confidentiality.
- B. If the Permittee has failed to submit any relevant facts or has submitted incorrect information in the permit application, the Permittee shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information.

XVI. PERMIT AMENDMENT OR REVISION

[A.A.C. R18-2-318, -319, and -320]

The Permittee shall apply for a permit amendment or revision for changes to the facility which do not qualify for a facility change without revision under Section XVII, as follows:

- A. Administrative Permit Amendment (A.A.C. R18-2-318);
- B. Minor Permit Revision (A.A.C. R18-2-319); and
- C. Significant Permit Revision (A.A.C. R18-2-320)

The applicability and requirements for such action are defined in the above referenced regulations.

XVII. FACILITY CHANGE WITHOUT A PERMIT REVISION

[A.A.C. R18-2-306.A.4 and -317]

- A. The Permittee may make changes at the permitted source without a permit revision if all of the following apply:
 - 1. The changes are not modifications under any provision of Title I of the Act or under ARS § 49-401.01(19);
 - 2. The changes do not exceed the emissions allowable under the permit whether expressed therein as a rate of emissions or in terms of total emissions;
 - 3. The changes do not violate any applicable requirements or trigger any additional applicable requirements;
 - 4. The changes satisfy all requirements for a minor permit revision under A.A.C. ~~R18-2-319.A~~; and
 - 5. The changes do not contravene federally enforceable permit terms and conditions that are monitoring (including test methods), record keeping, reporting, or compliance certification requirements.
- B. The substitution of an item of process or pollution control equipment for an identical or substantially similar item of process or pollution control equipment shall qualify as a change that does not require a permit revision, if it meets all of the requirements of Conditions XVII.A and XVII.C of this Attachment.

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- C. For each change under Conditions XVII.A and XVII.B above, a written notice by certified mail or hand delivery shall be received by the Director and the Administrator a minimum of 7 working days in advance of the change. Notifications of changes associated with emergency conditions, such as malfunctions necessitating the replacement of equipment, may be provided less than 7 working days in advance of the change, but must be provided as far in advance of the change; as possible or, if advance notification is not practicable, as soon after the change as possible.
- D. Each notification shall include:
 - 1. When the proposed change will occur;
 - 2. A description of the change;
 - 3. Any change in emissions of regulated air pollutants; and
 - 4. Any permit term or condition that is no longer applicable as a result of the change.
- E. The permit shield described in A.A.C. R18-2-325 shall not apply to any change made under this Section, other than implementation of an alternate to Conditions XVII.A and XVII.B above.
- F. Except as otherwise provided for in the permit, making a change from one alternative operating scenario to another as provided under A.A.C. R18-2-306.A.11 shall not require any prior notice under this Section.
- G. Notwithstanding any other part of this Section, the Director may require a permit to be revised for any change that, when considered together with any other changes submitted by the same source under this Section over the term of the permit, do not satisfy Condition XVII.A above.

XVIII. TESTING REQUIREMENTS

[A.A.C. R18-2-312]

- A. The Permittee shall conduct performance tests as specified in the permit and at such other times as may be required by the Director.
- B. Operational Conditions during Testing

Tests shall be conducted during operation at the maximum possible capacity of each unit under representative operational conditions unless other conditions are required by the applicable test method or in this permit. With prior written approval from the Director, testing may be performed at a lower rate. Operations during periods of start-up, shutdown, and malfunction (as defined in A.A.C. R18-2-101) shall not constitute representative operational conditions unless otherwise specified in the applicable standard.
- C. Tests shall be conducted and data reduced in accordance with the test methods and procedures contained in the Arizona Testing Manual unless modified by the Director pursuant to A.A.C. R18-2-312.B.
- D. Test Plan

At least 14 calendar days prior to performing a test, the Permittee shall submit a test plan to the Director in accordance with A.A.C. R18-2-312.B and the Arizona Testing Manual. This test plan must include the following:

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1. Test duration;
2. Test location(s);
3. Test method(s); and
4. Source operation and other parameters that may affect test results.

E. Stack Sampling Facilities

The Permittee shall provide, or cause to be provided, performance testing facilities as follows:

1. Sampling ports adequate for test methods applicable to the facility;
2. Safe sampling platform(s);
3. Safe access to sampling platform(s); and
4. Utilities for sampling and testing equipment.

F. Interpretation of Final Results

Each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic mean of the results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs is required to be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances beyond the Permittee's control, compliance may, upon the Director's approval, be determined using the arithmetic mean of the results of the other two runs. If the Director or the Director's designee is present, tests may only be stopped with the Director's or such designee's approval. If the Director or the Director's designee is not present, tests may only be stopped for good cause. Good cause includes: forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances beyond the Permittee's control. Termination of any test without good cause after the first run is commenced shall constitute a failure of the test. Supporting documentation, which demonstrates good cause, must be submitted.

G. Report of Final Test Results

A written report of the results of all performance tests shall be submitted to the Director within 30 days after the test is performed. The report shall be submitted in accordance with the Arizona Testing Manual and A.A.C. R18-2-312.A.

XIX. PROPERTY RIGHTS

[A.A.C. R18-2-306.A.8.d]

This permit does not convey any property rights of any sort, or any exclusive privilege.

XX. SEVERABILITY CLAUSE

[A.A.C. R18-2-306.A.7]

The provisions of this permit are severable. In the event of a challenge to any portion of this permit, or if any portion of this permit is held invalid, the remaining permit conditions remain valid and in force.

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XXI. PERMIT SHIELD

[A.A.C. R18-2-325]

Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements identified in the portions of this permit subtitled “Permit Shield”. The permit shield shall not apply to minor revisions pursuant to Condition XVI.B of this Attachment and any facility changes without a permit revision pursuant to Section XVII of this Attachment.

XXII. PROTECTION OF STRATOSPHERIC OZONE

[40 CFR Part 82]

If this source becomes subject to the provisions of 40 CFR Part 82, then the Permittee shall comply with these provisions accordingly.

ATTACHMENT “B”: SPECIFIC CONDITIONS

**Air Quality Control Permit No. 42704
For
*Apache Nitrogen Products, Inc.***

I. FACILITY WIDE REQUIREMENTS

A. Operating Limitations

1. The Permittee shall have on site or on call a person certified in EPA Reference Method 9.
[A.A.C. R18-2-306.A.3.c]
2. The Permittee shall operate all equipment identified in Attachment “C” in accordance with vendor-supplied operations and maintenance instructions. If vendor-supplied operations and maintenance instructions are not available, the Permittee shall prepare an Operation and Maintenance Plan, which provides adequate information to properly operate and maintain the these equipment in good working order. In the absence of vendor-supplied operations and maintenance instructions, the Permittee shall operate the equipment in accordance with the Operation and Maintenance Plan.
[A.A.C. R18-2-306.A.2]

B. Monitoring, Recordkeeping and Reporting Requirements

1. The Permittee shall maintain, on-site, records of the manufacturer's specifications or Operation and Maintenance Plan for minimizing emissions for all process and control equipment listed in Attachment “C”.
[A.A.C. R18-2-306.A.4]
2. The Permittee shall submit reports of all monitoring activities required in Attachment “B” along with the compliance certifications required by Section VII of Attachment “A”. All instances of deviations from the requirements of the Permit shall be clearly identified in the reports.
[A.A.C. R18-2-306.A.5]

C. General Requirements for Compliance Assurance Monitoring (CAM)

Following requirements shall be applicable to any equipment in this Attachment that is subject to CAM requirements.

1. Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the Permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the emission points are operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The Permittee shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.
[40 CFR 64.7.(c)]

2. Response to excursions

- a. Upon detecting an excursion or exceedance, the Permittee shall restore operation of the emission point (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction, and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action, or any necessary follow-up actions to return operations to within the indicator range, designated condition, or below applicable emission limitation or standard, as applicable.

[40 CFR 64.7.(d)(1)]

- b. Determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation, and maintenance procedures and records, and inspection of the control device, associated capture system, and process.

[40 CFR 64.7.(d)(2)]

3. After approval of monitoring under this part, if the Permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the Permittee shall promptly notify the Department, and if necessary, submit a proposed modification to this permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, re-establishing indicator ranges or designated conditions, modifying the frequency of conduction monitoring and collecting data, or the monitoring of additional parameters.

[40 CFR 64.7(e)]

4. Excursions shall be reported as required by Condition VII.B.4 of Attachment "A" of this permit. The report shall include, at a minimum, the following: [A.A.C. R18-2-309(2)(c)(iii)]

- a. Summary information on the number, duration and cause (including unknown cause, if applicable) of excursion or exceedances, as applicable, and the corrective actions taken; and

[40 CFR 64.9(a) (2)(i)]

- b. Summary information on the number, duration and cause (including unknown cause, if applicable) for monitoring downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable).

[40 CFR 64.9(a) (2)(ii)]

II. NITRIC ACID PRODUCTION UNITS (COVERED BY NEW SOURCE PERFORMANCE STANDARDS)

A. Applicability

This Section is applicable to the nitric acid production facilities- Ammonia Oxidation Process No. 3 (AOP-3) and Ammonia Oxidation Process No. 4 (AOP-4).

B. General Requirements

The following requirements apply to the operation, maintenance, recordkeeping and testing related to the nitric acid plants and associated monitoring systems in accordance with 40 CFR Part 60, Subpart A – General Provisions.

1. All requests, reports, applications, submittals, and other communications to the Director pursuant to A.A.C. R18-2-901, -902, and 40 CFR Part 60 shall be submitted in duplicate to the EPA Region 9 office at the following address:

Director, Air Division (Attn: AIR-1)
U.S. Environmental Protection Agency
75 Hawthorne Street
San Francisco, CA 94105

[40 CFR 60.4(a)]

2. The Permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative. [40 CFR 60.7(b)]

3. Quarterly excess emissions and monitoring systems performance reports

- a. Permittee shall submit an excess emissions and monitoring systems performance (MSP) report and/or a summary report form to the Department for every calendar quarter, unless the total duration of excess emissions for the reporting period is less than 1 percent of the total operating time for the reporting period and the continuous monitoring system downtime for the reporting period is less than 5 percent of the total operating time for the reporting period, in which case only the summary report form shall be submitted and the excess emissions report need not be submitted unless requested by the Department. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter.

[40 CFR 60.7(c) and (d)]

- b. The summary report form submission required in the preceding paragraph shall be in the format specified in 40 CFR 60.7(d). Each excess emission and MSP report shall include the following information: [40 CFR 60.7(c)]

- (1) The magnitude of excess emissions computed, any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions. The process operating time during the reporting period.
- (2) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted.
- (3) The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.
- (4) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such

information shall be stated in the report.

4. The Permittee shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required in a permanent form suitable for inspection. The file shall be retained for at least two years following the date of such measurements, maintenance, reports, and records, except as provided in 40 CFR 60.7(f)(1) and (2). [40 CFR 60.7(f)]
5. At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, operate and maintain each process equipment including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. [40 CFR 60.11(d), A.A.C. R18-2-331.A.3.e]
[Material permit conditions are indicated by underline and italics]
6. For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any standard in 40 CFR Part 60, nothing shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed. [40 CFR 60.11(g)]
7. The Permittee shall not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission, which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with opacity standard or with a standard, which is based on the concentration of a pollutant in the gases discharged to the atmosphere. [40 CFR 60.12]
8. The Permittee shall comply with the “General Notification and Reporting Requirements” found in 40 CFR 60.19. [40 CFR 60.19]

C. Opacity

1. Emission Limitations/Standards

At all times except for periods of startup, shutdown, and malfunction as defined in 40 CFR 60.2, the Permittee shall not cause or allow to be discharged into the atmosphere from AOP-3 and/or AOP-4 any gases which exhibit 10 percent opacity, or greater. Opacity readings of portions of plumes which contain condensed, uncombined water vapor shall not be used for purposes of determining compliance with the opacity standard.

[40 CFR 60.72(a)(2), 60.11(c), 60.11(e)(1) and A.A.C. R18-2-331.A.3.f]
[Material permit conditions are indicated by underline and italics]

2. Monitoring, Record keeping and Reporting Requirements

- a. The Permittee shall calibrate, maintain and operate the continuous opacity monitoring systems (COMS) on AOP-3 and AOP-4 to monitor and record opacity

of the exhaust gases. The span of the systems shall be set at 80 to 100 percent opacity.

[A.A.C. R18-2-306.A.3.c and A.A.C. R18-2-331.A.3.c]

[Material permit conditions are indicated by underline and italics]

- b. The COMS shall comply with the requirements and procedures contained 40 CFR 60 Appendix B Performance Specification 1, and shall comply with the following quality assurance requirements: [A.A.C. R18-2-A9.3.1]

- (1) The Permittee shall check the zero and span drift at least once daily in accordance with the method prescribed by the manufacturer of such systems unless the manufacturer recommends adjustments at shorter intervals, in which case such recommendations shall be followed. The zero and span shall, as a minimum, be adjusted whenever the 24-hour zero drift or the 24-hour span drift exceeds 2% opacity. The optical surfaces exposed to the effluent gases shall be cleaned prior to performing the zero or span drift adjustments except that for systems using automatic zero adjustments, the optical surfaces shall be cleaned when the cumulative automatic zero compensation exceeds 4% opacity. Unless otherwise approved by the Director, the minimum procedures shall include a method for producing a simulated zero opacity condition and an upscale (span) opacity condition using a certified neutral density filter or other related technique to produce a known obscuration of the light beam. Such procedures shall provide a system check of the analyzer internal optical surfaces and all electronic circuitry including the lamp and photodetector assembly. [A.A.C. R18-2-A9.4.3]

- (2) Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required under (1) above, the COMS shall be in continuous operation and shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 10-second period. [A.A.C. R18-2-A9.5.1]

- (3) The Permittee shall reduce all data from COMS to six-minute averages. Six-minute opacity averages shall be calculated from 24 or more data points equally spaced over each six-minute period. Data recorded during periods of system breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the data averages computed. An arithmetic or integrated average of all data may be used. [A.A.C. R18-2-A9.8]

- c. Excess Emissions

Except during periods of startup, shutdown, and malfunction, any 6-minute continuous period during which the average opacity, as measured by the COMS, exceeds 10% opacity, shall be reported as excess emission.

[A.A.C. R18-2-306.A.3.c]

3. Permit Shield

Compliance with the Conditions of this Part shall be deemed compliance with 40 CFR 60.72(a)(2). [A.A.C. R18-2-325]

D. Nitrogen Oxides (NO_x)

1. Emission Limitation and Standards

- a. The Permittee shall not cause or allow to be discharged into the atmosphere from AOP-3 and AOP-4 any gases, which contain nitrogen oxides (NO_x), expressed as nitrogen dioxide (NO₂), in excess of 1.5 kg per metric ton of acid produced (3.0 lb per ton), the production being expressed as 100 percent nitric acid.

[40 CFR 60.72(a)(1)]

- b. The Permittee shall not cause or allow to be discharged into the atmosphere from AOP-3 any gases which contain NO_x, expressed as NO₂, in excess of 8.60 pounds per hour. Compliance with the maximum NO_x emission limits shall be based on a 120-day rolling average calculated every clock hour in pounds per hour as determined by the NO_x Continuous Emission Rate Monitoring System (CERMS) prescribed under Condition II.D.3.a(1) and II.D.3.b of this Attachment.

[Installation Permit 1229-Conditions XII.B.3 and XII.B.4.a, A.A.C. R18-2-331.A.3.a, A.A.C. R18-2-306.01.A, Permit No.1000038 Condition III.B.1]

[Material permit conditions are indicated by underline and italics]

2. Air Pollution Control Requirements

- a. During startups of AOP-3 and AOP-4, the Permittee shall operate the Hydrogen Peroxide System in accordance with "AOP-3 and AOP-4 Absorption Tower Hydrogen Peroxide Injection Operating Procedure", Attachment "E" of this permit to minimize startup nitrogen oxides emissions.

[A.A.C. R18-2-306.A.2 and A.A.C. R18-2-331.A.3.e]

[Material permit conditions are indicated by underline and italics]

- b. The Permittee shall operate and maintain the Selective Catalytic Reduction (SCR) system installed at the AOP-3 tail gas system to control nitrogen oxide emissions before venting the tail gas to the atmosphere.

[Installation Permit 1229 as modified by Significant Revision

1001029 Condition XII.G, A.A.C. R18-2-331.A.3.e]

[Material permit conditions are indicated by underline and italics]

3. Monitoring, Record keeping and Reporting Requirements

- a. Continuous Emission Monitoring System (CEMS) for AOP-3 and AOP-4

- (1) The Permittee shall calibrate, maintain and operate the CEMS installed on AOP-3 and AOP-4 for measuring exhaust gas nitrogen oxides (NO_x). The span value of the systems shall be 500 ppm of NO₂. The systems shall meet the performance specification set forth under 40 CFR Part 60, Appendix B, "Performance Specification 2 - Specifications and Test Procedures for SO₂ and NO_x Continuous Emission Monitoring Systems in Stationary Sources". The pollutant gas mixtures under the Performance Specification 2 and for calibration checks shall be NO₂.

[40 CFR 60.13(a) and 60.73(a), A.A.C. R18-2-331.A.3.c]

[Material permit conditions are indicated by underline and italics]

- (2) The NO_x CEMS shall comply with the following quality control requirements:

- (a) Calibration drift checks

The Permittee shall check the zero (or low-level value between 0 and 20% of span value) and span (50 to 100 percent of span value) calibration drifts (CD) at least once daily in accordance with a written procedure prescribed by the manufacturer.

[40 CFR 60.13(d)(1)]

(b) Zero and span drift adjustments

(i) The zero and span shall, as a minimum, be adjusted whenever the 24-hr zero drift or 24-hr span drift exceeds 25 ppm.

[40 CFR 60.13(d)(1)]

(ii) The CEMS shall allow for the amount of excess zero and span drift measured at the 24-hour interval checks to be recorded and quantified.

[40 CFR 60.13(d)(1)]

(c) Minimum frequency of operation

Except during periods of system breakdowns, repairs, calibration checks, and zero and span adjustments, the CEMS shall be in continuous operation and shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

[40 CFR 60.13(e)(2)]

(d) Data reduction procedures

(i) The Permittee shall reduce all data from the CEMS to 1-hour averages. The 1-hour averages shall be computed from four or more data points equally spaced over each 1-hour period.

(ii) Data recorded during periods of system breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the data averages computed under the previous paragraph. An arithmetic or integrated average of all data may be used. The data may be recorded in reduced or non-reduced form.

[40 CFR 60.13(h)]

b. Continuous Emission Rate Monitoring System (CERMS) for AOP-3

The Permittee shall calibrate, maintain and operate the flow monitor installed at the AOP-3 discharge stack to measure volumetric flow rates of the exhaust gas.

The flow monitor shall meet the performance specification set forth under 40 CFR Part 60, Appendix B, "Performance Specification 6 - Specifications and Test Procedures for Continuous Emission Rate Monitoring Systems in Stationary Sources" Performance and Equipment Specifications.

[Installation Permit No. 1229-Condition XII.F.1.b, A.A.C. R18-2-331.A.3.c]

[Material permit conditions are indicated by underline and italics]

- c. *The Permittee shall conduct or cause to be conducted, quality assurance procedures on the CEMS in accordance with the methods specified in 40 CFR Part 60, Appendix F.* [A.A.C. R18-2-306.01 and A.A.C. R18-2-331.A.3.c]
[Material permit conditions are identified by underline and italics]
- d. The Permittee shall record the daily production, expressed as 100 percent nitric acid, and hours of operation for each nitric acid plant. [40 CFR 60.73(c)]
- e. The Permittee shall submit reports of excess emissions and monitor downtime, in accordance with Condition II.B.3 of this Attachment. Excess emissions shall be reported for all periods of operation including startup, shutdown and malfunction. Periods of excess emissions that shall be reported are defined as follows:
 - (1) Any 3-hour period during which the average nitrogen oxides emissions (arithmetic average of three contiguous 1-hr periods) for AOP-3 and AOP-4, as measured by CEMS, exceeds emission standard in Condition II.D.1.a of this Attachment. [40 CFR 60.73(e)]
 - (2) Any 120-day rolling average calculated every clock hour in pounds per hour for AOP-3, as determined by the NO_x continuous emission rate monitoring system (CERMS), exceeds emission standard in Condition II.D.1.b of this Attachment. [A.A.C. R18-2-306.A.3.c]

5. Permit Shield

Compliance with the Conditions of this Part shall be deemed compliance with the requirements of 40 CFR 60.72(a)(1), 40 CFR 60.73(a), 40 CFR 60.73(c), 40 CFR 60.73(e), Installation Permit 1229-Conditions XII.B.3, XII.B.4.a, XII.F.1.b and XII.F.4, Permit No.1000038 Condition III.B.1 and Significant Revision 1001029 Condition XII.G. [A.A.C. R18-2-325]

E. Ammonia

1. Emission Limits and Standards

- a. The Permittee shall not cause or allow to be discharged into the atmosphere from AOP-3 any gases which contain ammonia in excess of 3.00 pounds per hour. [Installation Permit 1229 as modified by Significant Revision 1001029 Condition XII.B.3]
- b. The Permittee shall maintain and operate AOP-3 in such a manner as to control the emissions of ammonia and to minimize off-plant odors. [Permit No. 1229 Condition XII.C]

2. Performance Testing Requirements

The Permittee shall conduct annual performance test for ammonia on the exhaust gases from AOP-3. The performance tests shall be conducted and data reduced in accordance with EPA Reference Method 206. [A.A.C. R18-2-306.A.3, -312.A, and -312.B]

3. Permit Shield

Compliance with the terms of this Part shall be deemed compliance with the requirements of Installation Permit 1229-Conditions XII.B.3 and XII.C. [A.A.C. R18-2-325]

III. LIQUID AMMONIUM NITRATE PLANT

A. Applicability

This Section is applicable to the Liquid Ammonium Nitrate (LAN) Plant, which consists of the ammonium nitrate neutralizer, wet scrubber and associated equipment.

B. Particulate matter and Opacity

1. Emissions Limits and Standard

- a. The Permittee shall not cause or allow to be discharged into the atmosphere the particulate matter in any one hour from the neutralizer in total quantities in excess of the amounts calculated by the following equation and rounded off to two decimal places:

$$E=4.10 P^{0.67}$$

Where:

E = The maximum allowable particulate emissions rate in pounds-mass per hour.

P = The process weight rate in tons-mass per hour, which shall be the total weight of nitric acid solution and ammonia introduced into the Liquid Ammonium Nitrate Plant for the entire period of continuous operation of the plant or for a typical portion thereof, divided by the number of hours of such period or portion thereof. [A.A.C. R-2-730.A.1.a]

- b. The Permittee shall not cause or allow to be discharged into the atmosphere from the ammonium nitrate neutralizing vessel any gases which contain ammonium nitrate, expressed as particulate matter, in excess of 10.00 pounds per hour.

[Installation Permit 25017-Condition XII.D]

- c. The Permittee shall not cause or allow to be discharged into the atmosphere from the neutralizer any plume or effluent, the opacity of which is greater than 20% as determined by EPA Reference Method 9. Where the presence of uncombined water is the only reason for the exceedance of the visible emissions requirement, such exceedance shall not constitute a violation. [A.A.C. R18-2-702.B and -702.C]

2. Air Pollution Control Requirements

The Permittee shall maintain and operate a high efficiency wet scrubber on the neutralizer exhaust gases to remove ammonia and ammonium nitrate from the neutralizer exhaust gases. The wet scrubber shall be fully operational upon startup of the neutralizer.

[Installation Permit 25017 Condition XII.A and G, A.A.C. R18-2-331.A.3.e]

[Material permit conditions are indicated by underline and italics]

3. Compliance Assurance Monitoring for Particulate Matter

- a. Indicators

(1) *The Permittee shall calibrate, maintain and operate a monitoring device*

for the continuous measurement of the pressure differential across the venturi portion of the wet scrubber. The monitoring device shall be certified to be accurate within ± 250 pascals (± 1 inch water) gauge pressure by its manufacturer and shall be calibrated on an annual basis in accordance with the manufacturer's instructions.

[A.A.C. R18-2-306.A.2, -306.A.3.b, and A.A.C. R18-2-331.A.3.c]

[Material permit conditions are indicated by underline and italics]

- (2) The Permittee shall calibrate, maintain and operate a monitoring device for the continuous measurement of the scrubbing liquid flow rate to the venturi portion of the wet scrubber. The monitoring device shall be certified by the manufacturer to be accurate within ± 5 percent of the design scrubbing liquid flow rate and shall be calibrated on an annual basis in accordance with the manufacturer's instructions.

[A.A.C. R18-2-306.A.2, -306.A.3.b, and A.A.C. R18-2-331.A.3.c]

[Material permit conditions are indicated by underline and italics]

- (3) The Permittee shall calibrate, maintain and operate a pH monitor for the continuous measurement of the pH for the scrubbing liquid. The pH monitor shall be calibrated on an annual basis in accordance with the manufacturer's instructions.

[A.A.C. R18-2-306.A.2, -306.A.3.b, and A.A.C. R18-2-331.A.3.c]

[Material permit conditions are indicated by underline and italics]

b. Monitoring Approach

The pressure differential across the venturi portion of the wet scrubber, scrubber liquid flow rate, and the pH of the scrubber liquid shall be recorded at least once per day.

[A.A.C. R18-2-306.A.3.b]

c. Excursion Determination

- (1) Pressure differential across the venturi portion of the wet scrubber and scrubber flow rate to the venturi portion of the wet scrubber ± 30 percent beyond the averages obtained in the most recent performance test established in Condition III.B.4.d of this Attachment shall be considered an excursion.

[A.A.C. R18-2-306.A.3.b]

- (2) pH of the scrubber liquid beyond ± 0.5 of the average obtained in the most recent performance test established in Condition III.B.4.d of this Attachment shall be considered an excursion.

[A.A.C. R18-2-306.A.3.b]

- d. In addition to the requirement under a through c above, the Permittee shall follow all the requirements under Condition I.C of this Attachment.

4. Testing Requirements

- a. The Permittee shall conduct annual performance test at the neutralizer for opacity and ammonium nitrate, expressed as particulate matter.

[A.A.C. R18-2-306.A.3 and -312.A]

- b. Performance tests for particulate matter shall be conducted in accordance with EPA Reference Method 5.

[A.A.C. R18-2-306.A.3, -312.B]

- c. Performance tests for opacity shall be conducted in accordance with EPA Reference Method 9. [A.A.C. R18-2-306.A.3, -312.B]
- d. During each performance test, the Permittee shall also measure and record the average gas stream pressure differential across the venturi portion of the scrubber, the average scrubbing liquid flow rate, and the pH of the scrubbing liquid. [A.A.C. R18-2-306.A.3.c and -306.A.4]

5. Permit Shield

Compliance with the terms of this Part shall be deemed compliance with the requirement(s) of A.A.C. R18-2-702.B, 702.C, and 730.A.1.a, and Conditions XII.A, XII.D & XII.G of Installation Permit 25017. [A.A.C. R18-2-325]

C. Ammonia Emissions

1. Emissions Limits and Standards

- a. The Permittee shall not cause or allow to be discharged into the atmosphere from the Neutralizer, any gases which contain ammonia in excess of 10.00 pounds per hour. [Installation Permit 25017 Condition XII.D]
- b. The Permittee shall maintain and operate the Liquid ammonium nitrate plant in such a manner as to control the emissions of ammonia and to minimize off-plant odors. [Installation Permit No. 25017 Condition XII.C]

2. Air Quality Control Requirements

In addition to operation and maintenance of the wet scrubber prescribed in paragraph III.B.2 of this Section, the Permittee shall implement and comply with the provisions specified in Attachment "D" of this Permit, "Ammonia Emissions Reduction Plan", to reduce to the maximum extent practicable, the ammonia emissions associated with the neutralizer. [Installation Permit No.25017 Condition XII.B, A.A.C. R18-2-331.A.3.e]
[Material permit conditions are indicated by underline and italics]

3. Testing Requirements [A.A.C. R18-2-312]

- a. The Permittee shall conduct annual performance test at the neutralizer to determine the ammonia emission rate in pounds per hour.
- b. Performance tests shall be conducted and data reduced in accordance with EPA Reference Method 206.

4. Permit Shield

Compliance with the terms of this Part shall be deemed compliance with the requirements of Conditions XII.B, XII.C, and XII.D of Installation Permit 25017. [A.A.C. R18-2-325]

IV. AMMONIUM NITRATE PRILL PLANT

A. Applicability

This Section is applicable to the following:

Ammonium Nitrate Prill Plant (Prill Plant) that consists of the following affected equipment:

- Falling Film Evaporator # 3
- Prill Tower
- Prill Plant Rotary Pre-dryer
- Fluidized Bed Dryer/Cooler
- Rotex Vibrating Screen
- Coating Drum
- Product Storage Barns #1 and #2; and
- All Material Conveying Equipment (Belts and Conveyors)

B. Particulate Matter and Opacity

1. Emission Limitations and Standards

- a. The Permittee shall not cause or allow to be discharged into the atmosphere the particulate matter in any one hour in total quantities from the prill plant as defined in paragraph IV.A above in excess of the amounts calculated by the following equation: [A.A.C. R18-2-730.A.1.a]

$$E = 4.10 P^{0.67}$$

Where:

E= The maximum allowable particulate emissions rate in pounds-mass per hour for the prill production process.

P= The process weight rate in tons-mass per hour, which shall be the total weight of ammonium nitrate solution introduced into the prill plant for the entire period of continuous operation of the plant or for a typical portion thereof, divided by the number of hours of such period or portion thereof.

- b. The Permittee shall not cause or allow to be discharged into the atmosphere any plume or effluent from any of the affected equipment under this Section, the opacity of which is greater than 20% as determined by EPA Reference Method 9. Where the presence of uncombined water is the only reason for the exceedance of this opacity standard, such exceedance shall not constitute a violation.

[A.A.C. R18-2-702.B and -702.C]

2. Air Pollution Control Requirements

- a. The Permittee shall operate and maintain the two wet cyclones installed at the prill plant rotary pre-dryer to reduce particulate matter emissions from the pre-dryer exhaust. [A.A.C. R18-2-306.A.2, A.A.C. R18-2-331.A.3.e]
[Material permit conditions are indicated by underline and italics]
- b. The Permittee shall operate and maintain the three wet cyclones installed at the fluidized bed dryer/cooler to reduce particulate matter emissions from the dryer/cooler exhaust. [A.A.C. R18-2-306.A.2, A.A.C. R18-2-331.A.3.e]
[Material permit conditions are indicated by underline and italics]
- c. The Permittee shall operate, when the talc coating system is in use or as otherwise required, and maintain a baghouse installed to capture dry particulate ammonium nitrate emissions from the coating drum discharge hood and talc feeder. [A.A.C. R18-2-306.A.2, A.A.C. R18-2-331.A.3.e]
[Material permit conditions are indicated by underline and italics]

3. Monitoring, Recordkeeping and Reporting Requirements

- a. Opacity [A.A.C. R18-2-306.A.3.c]
- (1) A certified Method 9 observer shall conduct a bi-weekly (once every two weeks) visual survey of visible emissions from the prill plant equipment, coating system baghouse and the falling film evaporator. The Permittee shall keep a record of the name of the observer, the date on which the observation was made, and the results of the observation.
- (2) If the observer sees a plume that on an instantaneous basis appears to exceed the previously established baseline opacity level, then the observer shall take a six-minute EPA Method 9 observation of the plume. If visibility or other conditions prevent the observation, the observer shall document these conditions.
- (3) If the six-minute opacity of the plume is less than the baseline level, the observer shall make a record of the location, date, and time of the observation; and the results of the Method 9 observation.
- (4) If the six-minute opacity of the plume exceeds the baseline level but is less than the applicable opacity standard, the Permittee shall adjust or repair the controls or process equipment to reduce the observed opacity to or below the baseline opacity level. The observer shall make a record of the location, date, and time of the observation, the results of the Method 9 observation, corrective action taken, and date & time of corrective action.
- (5) If the six-minute opacity of the plume exceeds the applicable opacity standard, the Permittee shall take corrective action and log all such actions. Such exceedance shall be reported as excess emissions in accordance with Condition XII.A.1 of Attachment "A".
- (6) Baseline re-establishment

If necessitated by the results of the bi-weekly monitoring, the Permittee may re-establish the baseline opacity level(s). Re-establishment of the

baseline(s) shall be performed utilizing the same procedures used in setting up the initial baseline level(s). Within 30 days of re-establishing the baseline opacity, the Permittee shall report the results to the Director. The report shall also contain a description of the need for re-establishing the baseline(s).

b. Compliance Assurance Monitoring for Wet Particulate Ammonium Nitrate Cyclones

(1) Indicators

- (a) The Permittee shall calibrate, maintain, and operate the differential pressure gauge installed at each of the five wet cyclone units to monitor the gas stream static pressure drop across each cyclone unit. The monitoring device shall be certified to be accurate within ± 250 pascals (± 1 inch water) gauge pressure by its manufacturer and shall be calibrated on an annual basis in accordance with the manufacturer's instructions.

[A.A.C. R18-2-306.A.3.c, A.A.C. R18-2-306.A.3.b, and -331.A.3.c]

[Material permit conditions are indicated by underline and italics]

- (b) The Permittee shall calibrate, maintain, and operate flow meters on each of the 5 (five) wet cyclone units to continuously monitor the flow rate of the scrubbing solution introduced to each cyclone unit. The monitoring device shall be certified by the manufacturer to be accurate within ± 5 percent of the design scrubbing liquid flow rate and shall be calibrated on an annual basis in accordance with the manufacturer's instructions.

[A.A.C. R18-2-306.A.3.c, A.A.C. R18-2-306.A.3.b, and -331.A.3.c]

[Material permit conditions are indicated by underline and italics]

(2) Monitoring Approach

The pressure differential across each wet cyclone and the flow rate of the scrubbing solution to each wet cyclone shall be recorded at least once per day.

[A.A.C. R18-2-306.A.3.b]

(3) Excursion Determination

The pressure differential across each wet cyclone and the flow rate of the scrubbing solution to each wet cyclone beyond ± 30 percent of the averages obtained in the most recent performance test established in Condition IV.B.4.d shall be considered an excursion.

[A.A.C. R18-2-306.A.3.b]

- (4) In addition to the requirements under (1) to (3) above, the Permittee shall follow all the requirements under Condition I.C of this Attachment.

4. Performance Test Requirements

- a. The Permittee shall conduct annual performance tests at the exhaust stack of each cyclone at the Prill Plant Pre-dryer and the Fluidized Bed Dryer/Cooler to determine opacity and particulate matter emission rates in pounds per hour.

[A.A.C. R18-2-306.A.3, -312.A]

- b. Performance tests for particulate matter shall be conducted in accordance with EPA Reference Method 5. [A.A.C. R18-2-306.A.3, -312.B]
- c. Performance tests for opacity shall be conducted in accordance with EPA Reference Method 9. [A.A.C. R18-2-306.A.3, -312.B]
- d. During each performance test, the Permittee shall also measure and record the average pressure differential across wet cyclone, as well as the liquid flow rate through each wet cyclone unit. [A.A.C. R18-2-306.A.3.c and -306.A.4]

C. Permit Shield

Compliance with the terms of this Section shall be deemed compliance with the requirements of A.A.C. R18-2-702.B, -702.C and 730A.1.a. [A.A.C. R18-2-325]

V. BOILERS AND AOP-4 SUPERHEATER

A. Applicability

This section is applicable to following equipment:

- 1. Process Steam Boiler #1
- 2. Process Steam Boiler #2
- 3. Process Steam Boiler #3
- 4. AOP-4 Steam super heater

B. Fuel Limitation

The Permittee shall only burn natural gas in all the boilers and super heater listed above. [A.A.C. R18-2-306.01.A]

C. Particulate Matter and Opacity

- 1. Emissions Limitations and Standards
 - a. The Permittee shall not cause, allow or permit the emission of particulate matter, caused by combustion of fuel, from any fuel-burning operation into the atmosphere in excess of the amounts calculated by the following equation: [A.A.C. R18-2-724.C.1]

$$E = 1.02 Q^{0.769}$$

Where

E = the maximum allowable particulate emission rate in pounds-mass per hour.

Q = the heat input in million Btu per hour.

- b. For purposes of this Section, the heat input shall be the aggregate heat content of all fuels whose products of combustion pass through a stack or other outlet. The total heat input of all fuel-burning units on a plant or premises shall be used for determining the maximum allowable amount of particulate matter, which may be emitted. [A.A.C. R18-2-724.B]

- c. The Permittee shall not cause, allow or permit the opacity of any plume or effluent from any boiler to exceed 15%. [A.A.C. R18-2-724.J]

2. Monitoring, Recordkeeping, and Reporting Requirements

- a. The Permittee shall keep records of fuel supplier certifications or letters from fuel suppliers, containing information regarding the name of the fuel supplier and lower heating value of the fuel. These records shall be made available to ADEQ upon request. [A.A.C. R18-2-306.A.3.c]
- b. A certified EPA Reference Method 9 observer shall conduct a bi-weekly (once every two weeks) survey of visible emissions emanating from the stacks of all the boilers and superheater. If the opacity of the emissions observed appears to exceed 15%, the observer shall conduct a certified EPA Reference Method 9 observation. The Permittee shall keep records of the initial survey and any EPA Reference Method 9 observations performed. These records shall include the emission point observed, name of the observer, date and time of the observation, and the results of the observation. [A.A.C. R18-2-306.A.3.c]
- c. If the observation results in a Method 9 opacity reading in excess of 15%, the Permittee shall report this to ADEQ as excess emission as per Section XII.A of Attachment "A" and initiate appropriate corrective action to reduce the opacity below 15%. The Permittee shall keep a record of the corrective action performed. [A.A.C. R18-2-724.J]

3. Permit Shield

Compliance with this Section shall be deemed compliance with A.A.C. R18-2-724.B, A.A.C R18-2-724.C.1, and A.A.C R18-2-724.J. [A.A.C. R18-2-325]

VI. INTERNAL COMBUSTION ENGINE REQUIREMENTS

A. Applicability

This Section applies to following stationary rotating machineries:

- 1. Natural gas-fired 600-hp Caterpillar G3412A vapor compressor in brine concentrator plant
- 2. Natural gas-fired 830-hp Empire Power G399 generator
- 3. Diesel-fired 350-hp air compressor

B. Operational Limitations

- 1. Hourly Limitations

The Permittee shall not operate natural gas-fired 830-hp generator for more than 2880 hours per year, based on a twelve month rolling total.

[A.A.C. R18-2-306.01.A and -331.A.3.a]

[Material Permit Condition is indicated by underline and italics]

- 2. Monitoring and Recordkeeping Requirements

The Permittee shall keep records of monthly totals of the hours of operation for the 830-hp generator. At the end of each month, the Permittee shall calculate and record a rolling 12-month total of the hours of operation. [A.A.C. R18-2-306.A.3.c]

C. Fuel Limitations

1. The Permittee shall only fire low sulfur diesel (less than 0.9 percent by weight of sulfur) fuel in the 350-hp diesel-fired air compressor. [A.A.C. R18-2-719.H]
2. The Permittee shall only fire natural gas in the 600-hp Caterpillar vapor compressor and the 830-hp Empire Power electric generator. [A.A.C. R18-2-306.01.A]
3. Monitoring, Recordkeeping, and Reporting Requirements
 - a. The Permittee shall keep records of fuel supplier certifications or letters from fuel suppliers to demonstrate compliance with the sulfur content limit. These records shall be made available to ADEQ upon request. [A.A.C. R18-2-306.A.3.c]
 - b. The Permittee shall report to the Director any daily period during which the sulfur content of the fuel being fired in the diesel generator exceeds 0.8%. [A.A.C. R18-2-719.J]
4. Permit Shield

Compliance with this Part shall be deemed compliance with A.A.C. R18-2-719.H and A.A.C. R18-2-719.J. [A.A.C. R18-2-325]

D. Particulate Matter and Opacity

1. Emissions Limitations and Standards
 - a. The Permittee shall not cause, allow or permit the emission of particulate matter, caused by combustion of fuel, from any stationary rotating machinery into the atmosphere in excess of the amounts calculated by the following equation:
$$E = 1.02 Q^{0.769}$$
Where
 $E =$ the maximum allowable particulate emission rate in pounds-mass per hour.
 $Q =$ the heat input in million Btu per hour. [A.A.C. R18-2-719.C.1]
 - b. For purposes of this Section, the heat input shall be the aggregate heat content of all fuels whose products of combustion pass through a stack or other outlet. The total heat input of all operating fuel-burning units on a plant or premises shall be used for determining the maximum allowable amount of particulate matter, which may be emitted. [A.A.C. R18-2-719.B]
 - c. Opacity

The Permittee shall not cause, allow or permit to be emitted into the atmosphere from any stationary rotating machinery, smoke for any period greater than 10 consecutive seconds, which exceeds 40% opacity. Visible emissions when starting cold equipment shall be exempt from this requirement for the first 10 minutes. [A.A.C. R18-2-719.E]

2. Monitoring, Record keeping and Reporting Requirements [A.A.C. R18-2-306.A.3.c]

- a. The Permittee shall keep records of fuel supplier certifications or letters from fuel suppliers, containing information regarding the name of the fuel supplier and lower heating value of the fuel. These records shall be made available to ADEQ upon request.
- b. A certified EPA Reference Method 9 observer shall conduct a bi-weekly survey of visible emissions emanating from the stack of the internal combustion engines. If the opacity of the emissions observed appears to exceed the standard, the observer shall conduct a certified EPA Reference Method 9 observation. The Permittee shall keep records of the initial survey and any EPA Reference Method 9 observations performed. These records shall include the emission point observed, name of the observer, date and time of the observation, and the results of the observation.
- c. If the observation results in a Method 9 opacity reading in excess of 40%, the Permittee shall report this to ADEQ as excess emission and initiate appropriate corrective action to reduce the opacity below 40%. The Permittee shall keep a record of the corrective action performed.

3. Permit Shield

Compliance with this Part shall be deemed compliance with A.A.C. R18-2-719.C.1 and A.A.C. R18-2-719.E. [A.A.C. R18-2-325]

E. Sulfur Dioxide

1. Emission Limitations and Standards

The Permittee shall not emit or cause to emit more than 1.0 pound of sulfur dioxide per million Btu heat input. [A.A.C. R18-2-719.F]

2. Permit Shield

Compliance with this Part shall be deemed compliance with A.A.C. R18-2-719.F. [A.A.C. R18-2-325]

VII. GASOLINE STORAGE TANK

A. Operational Requirements

1. Gasoline storage tank shall be equipped with a submerged filling device or acceptable equivalent, for control of hydrocarbon emissions. [A.A.C. R18-2-710.B]
2. All pumps and compressors that handle gasoline shall be equipped with mechanical seals or other equipment of equal efficiency to prevent release of organic contaminants into the atmosphere. [A.A.C. R18-2-710.D]

B. Monitoring and recordkeeping requirements

1. The Permittee shall, for the gasoline storage tank, maintain a file, of the typical Reid vapor pressure of gasoline stored and of the dates of storage. Dates on which the storage vessel is empty shall be shown. [A.A.C. R18-2-710.E.1]

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2. The Permittee shall record the average monthly temperature and the true vapor pressure of gasoline at such temperature if the true vapor pressure is greater than 470 mm Hg (9.1 psia) and the gasoline is stored in a storage vessel other than the one equipped with a vapor recovery system or its equivalent. [A.A.C. R18-2-710.E.2.b]
3. The average monthly storage temperature shall be an arithmetic average calculated for each calendar month, or portion thereof, if storage is for less than a month, from bulk liquid storage temperatures determined at least once every seven days. [A.A.C. R18-2-710.E.3]
4. The true vapor pressure shall be determined by the procedures in American Petroleum Institute Bulletin 2517, amended as of February 1980 (and no future editions), which is incorporated herein by reference and on file with the Office of the Secretary of State. This procedure is dependent upon determination of the storage temperature and the Reid vapor pressure, which requires sampling of the petroleum liquids in the storage vessels. Unless the Director requires in specific cases that the stored petroleum liquid be sampled, the true vapor pressure may be determined by using the average monthly storage temperature and the typical Reid vapor pressure. For those liquids for which certified specifications limiting the Reid vapor pressure exist, the Reid vapor pressure may be used. For other liquids, supporting analytical data must be made available upon request to the Director when typical Reid vapor pressure is used. [A.A.C. R18-2-710.E.4]

C. Permit Shield

Compliance with the conditions of this Part shall be deemed compliance with A.A.C. R18-2-710.B, D, E.1, E.2.b, and E.4. [A.A.C. R18-2-325]

VIII. MISC. STORAGE TANKS/COOLING TOWERS

A. Applicability

The Section is applicable to following equipment/processes:

1. Nitric acid storage tanks
2. Liquid ammonium nitrate storage tanks
3. Cooling towers associated with nitric acid plant & powerhouse boilers.
4. Liquid fertilizer plant
5. Brine concentrator plant
6. Ammonia storage and unloading facility

B. Particulate Matter and Opacity

1. Emission Limitations and Standards
 - a. The Permittee shall not cause or permit the emissions of particulate matter discharged into the atmosphere in any one hour from the above equipment/processes in total quantities in excess of the amounts calculated by one of the following equations:
 - (1) For process sources having a process weight rate of 60,000 pounds per hour (30 tons per hour) or less, the maximum allowable emissions shall be determined by the following equation:

$$E = 4.10P^{0.67}$$

where:

E = the maximum allowable particulate emissions rate in pounds-mass per hour.

P = the process weight rate in tons-mass per hour.

- (2) For process weight rate greater than 60,000 pounds per hour (30 tons per hour), the maximum allowable emissions shall be determined by the following equation:

$$E = 55.0P^{0.11} - 40$$

where "E" and "P" are defined as indicated in (1) above.

[A.A.C. R18-2-730.A.1]

- b. For purposes of this Section, the total process weight from all similar units employing a similar type process shall be used in determining the maximum allowable emission of particulate matter. [A.A.C. R18-2-730.B]
- c. The Permittee shall not cause or allow to be discharged into the atmosphere any plume from any equipment affected under this Section which exhibits opacity greater than 20%, measured in accordance with EPA Reference Method 9. Where the presence of uncombined water is the only reason for the exceedance of this opacity standard, such exceedance shall not constitute a violation.

[A.A.C. R18-2-702.B and -702.C]

2. Monitoring, Record keeping and Reporting Requirements

- a. A certified EPA Reference Method 9 observer shall conduct a bi-weekly (once in every two weeks) survey of visible emissions emanating from each affected equipment under this Section. If the opacity of the emissions observed appears to exceed 20%, the observer shall conduct a certified EPA Reference Method 9 observation. The Permittee shall keep records of the initial survey and any EPA Reference Method 9 observations performed. These records shall include the emission point observed, name of the observer, date and time of the observation, and the results of the observation. [A.A.C. R18-2-306.A.3.c]
- b. If the observation results in a Method 9 opacity reading in excess of 20%, the Permittee shall report this to ADEQ as excess emission and initiate appropriate corrective action to reduce the opacity below 20%. The Permittee shall keep a record of the corrective action performed. [A.A.C. R18-2-306.A.3.c]

3. Permit Shield

Compliance with the conditions of this Part shall be deemed compliance with A.A.C. R18-2-702.B, A.A.C. R18-2-702.C, A.A.C. R18-2-730.A.1 and A.A.C. R18-2-730.B.

[A.A.C. R18-2-325]

C. Nitrogen Oxides

1. Emission Limitations and Standards

The Permittee shall not cause or permit the emission of nitrogen oxides (NO_x) expressed as nitrogen dioxide (NO₂) greater than 500 parts per million. [A.A.C. R18-2-730.A.3]

2. Air Pollution Control Requirement

The Permittee shall operate and maintain a wet scrubber installed on the vents of the nitric acid storage tanks affected under this Section for minimizing nitrogen oxides emissions of the vent fume and reducing its opacity.

[Permit Revision No. 1001609 to Air Quality Control
Permit No. M31143P0-98 and A.A.C. R18-2-331.A.3.e]

[Material Permit Condition is indicated by underline and italics]

3. Permit Shield

Compliance with the conditions of this Part shall be deemed compliance with A.A.C. R18-2-730.A.3 and Permit Revision No. 1001609. [A.A.C. R18-2-325]

D. VOCs and Other Regulated Pollutants

1. Permittee shall not cause or permit the emission of gaseous or odorous materials from equipment and operations under this Section in such quantities or concentrations as to cause air pollution. [A.A.C. R18-2-730.D]

2. Materials including solvents or other volatile compounds, paints, acids, alkalies, and other chemicals utilized in the processes under this Section shall be processed, stored, used, and transported in such a manner and by means that they will not evaporate, leak, escape or be otherwise discharged into the ambient air so as to cause or contribute to air pollution. Where means are available to reduce effectively the contribution to air pollution from evaporation, leakage or discharge, the installation and use of such control methods, devices, or equipment shall be mandatory. [A.A.C. R18-2-730.F]

3. Where a stack, vent or other outlet is at such a level that fumes, gas mist, odor, smoke, vapor or any combination thereof constituting air pollution is discharged to adjoining property, the Director may require the installation of abatement equipment or the alteration of such stack, vent, or other outlet by the Permittee to a degree that will adequately dilute, reduce or eliminate the discharge of air pollution to adjoining property. [A.A.C. R18-2-730.G]

4. Permit Shield

Compliance with the conditions of this Part shall be deemed compliance with A.A.C. R18-2-730.D, F and G. [A.A.C. R18-2-325]

IX. FUGITIVE DUST REQUIREMENTS

A. Applicability

This Section applies to any source of fugitive dust in the facility.

B. Particulate Matter and Opacity

1. Open Areas, Roadways & Streets, Storage Piles, and Material Handling

a. Emission Limitations/Standards

- (1) Opacity of emissions from any non-point source shall not be greater than 40% measured in accordance with the Arizona Testing Manual, Reference Method 9. [A.A.C. R18-2-614]
- (2) The Permittee shall not cause, allow or permit visible emissions from any point source, in excess of 20 percent opacity. [A.A.C-R18-2-702.B]
- (3) The Permittee shall employ the following reasonable precautions to prevent excessive amounts of particulate matter from becoming airborne:
 - (a) Keep dust and other types of air contaminants to a minimum in an open area where construction operations, repair operations, demolition activities, clearing operations, leveling operations, or any earth moving or excavating activities are taking place, by good modern practices such as using an approved dust suppressant or adhesive soil stabilizer, paving, covering, landscaping, continuous wetting, detouring, barring access, or other acceptable means; [A.A.C. R18-2-604.A]
 - (b) Keep dust to a minimum from driveways, parking areas, and vacant lots where motor vehicular activity occurs by using an approved dust suppressant, or adhesive soil stabilizer, or by paving, or by barring access to the property, or by other acceptable means; [A.A.C. R18-2-604.B]
 - (c) Keep dust and other particulates to a minimum by employing dust suppressants, temporary paving, detouring, wetting down or by other reasonable means when a roadway is repaired, constructed, or reconstructed; [A.A.C. R18-2-605.A]
 - (d) Take reasonable precautions, such as wetting, applying dust suppressants, or covering the load when transporting material likely to give rise to airborne dust; [A.A.C. R18-2-605.B]
 - (e) Take reasonable precautions, such as the use of spray bars, wetting agents, dust suppressants, covering the load, and hoods when crushing, handling, or conveying material likely to give rise to airborne dust; [A.A.C. R18-2-606]
 - (f) Take reasonable precautions such as chemical stabilization, wetting, or covering when organic or inorganic dust producing material is being stacked, piled, or otherwise stored; [A.A.C. R18-2-607.A]
 - (g) Operate stacking and reclaiming machinery utilized at storage piles at all times with a minimum fall of material, or with the use

- of spray bars and wetting agents; [A.A.C. R18-2-607.B]
 - (h) Any other method as proposed by the Permittee and approved by the Director. [A.A.C. R18-2-306.A.3.c]

b. Monitoring and Recordkeeping Requirements

- (1) The Permittee shall maintain records of the dates on which any of the activities listed in Conditions IX.B.1.a.(3)(a) through IX.B.1.a.(3)(h) above were performed and the control measures that were adopted. [A.A.C. R18-2-306.A.3.c]

- (2) Opacity Monitoring Requirements

- (a) A certified Method 9 observer shall conduct a bi-weekly visual survey of visible emissions from the fugitive dust sources. The Permittee shall keep a record of the name of the observer, the date and location on which the observation was made, and the results of the observation.
 - (b) If the observer sees a visible emission from a fugitive dust source that on an instantaneous basis appears to exceed applicable opacity standard, then the observer shall, if practicable, take a six-minute Method 9 observation of the visible emission.
 - (i) If the six-minute opacity of the visible emission is less than or equal to applicable opacity standard, the observer shall make a record of the following:
 - a) Location, date, and time of the observation; and
 - b) The results of the Method 9 observation.
 - (ii). If the six-minute opacity of the visible emission exceeds applicable opacity standard, then the Permittee shall do the following:
 - a) Adjust or repair the controls or equipment to reduce opacity to below the applicable standard; and
 - b) Report it as an excess emission under Section XII.A of Attachment “A”. [A.A.C. R18-2-306.A.3.c]

c. Permit Shield

Compliance with the conditions of this Part shall be deemed compliance with A.A.C. R18-2-604.A, A.A.C. R18-2-604.B, A.A.C. R18-2-605, A.A.C. R18-2-606, A.A.C. R18-2-607, A.A.C. R18-2-702.B, and A.A.C. R18-2-614. [A.A.C. R18-2-325]

X. MOBILE SOURCE REQUIREMENTS

A. Applicability

The requirements of this Section are applicable to mobile sources which either move while emitting air contaminants or are frequently moved during the course of their utilization but are not classified as motor vehicles, agricultural vehicles, or agricultural equipment used in normal farm operations. Mobile sources shall not include portable sources as defined in A.A.C. R18-2-101.90.

[A.A.C.R18-2-801.A]

B. Particulate Matter and Opacity

1. Emission Limitations/Standards

a. Off-Road Machinery

The Permittee shall not cause, allow, or permit to be emitted into the atmosphere from any off-road machinery, smoke for any period greater than ten consecutive seconds, the opacity of which exceeds 40%. Visible emissions when starting cold equipment shall be exempt from this requirement for the first ten minutes. Off-road machinery shall include trucks, graders, scrapers, rollers, and other construction and mining machinery not normally driven on a completed public roadway.

[A.A.C.R18-2-802.A and -802.B]

b. Roadway and Site Cleaning Machinery

- (1) The Permittee shall not cause, allow or permit to be emitted into the atmosphere from any roadway and site cleaning machinery smoke or dust for any period greater than ten consecutive seconds, the opacity of which exceeds 40%. Visible emissions when starting cold equipment shall be exempt from this requirement for the first ten minutes.

[A.A.C.R18-2-804.A]

- (2) The Permittee shall take reasonable precautions, such as the use of dust suppressants, before the cleaning of a site, roadway, or alley. Earth or other material shall be removed from paved streets onto which earth or other material has been transported by trucking or earth moving equipment, erosion by water or by other means.

[A.A.C. R18-2-804.B]

- c. Unless otherwise specified, no mobile source shall emit smoke or dust the opacity of which exceeds 40%.

[A.A.C.R18-2-801.B]

2. Recordkeeping Requirement

The Permittee shall keep a record of all emissions related maintenance activities performed on the Permittee's mobile sources stationed at the facility as per manufacturer's specifications.

[A.A.C.R18-2-306.A.5.a]

3. Permit Shield

Compliance with this Section shall be deemed compliance with A.A.C. R18-2-801, A.A.C. R18-2-802.A, A.A.C. R18-2-804.A and A.A.C. R18-2-804.B.

[A.A.C.R18-2-325]

XI. OTHER PERIODIC ACTIVITY REQUIREMENTS

A. Abrasive Blasting

Particulate Matter and Opacity

1. Emission Limitations/Standards

- a. The Permittee shall not cause or allow sandblasting or other abrasive blasting without minimizing dust emissions to the atmosphere through the use of good modern practices. Good modern practices include:

- (1) Wet blasting;
- (2) Effective enclosures with necessary dust collecting equipment; or
- (3) Any other method approved by the Director.

[A.A.C. R18-2-726]

b. Opacity

The Permittee shall not cause, allow or permit visible emissions from sandblasting or other abrasive blasting operations in excess of 20% opacity, as measured by EPA Reference Method 9.

[A.A.C. R18-2-702.B]

2. Monitoring and Recordkeeping Requirement

Each time an abrasive blasting project is conducted, the Permittee shall log in ink or in an electronic format, a record of the following:

- a. The date the project was conducted;
- b. The duration of the project; and
- c. Type of control measures employed.

[A.A.C. R18-2-306.A.3.c]

3. Permit Shield

Compliance with this Part shall be deemed compliance with A.A.C. R18-2-726, A.A.C. R18-2-702.B.

[A.A.C. R18-2-325]

B. Use of Paints

1. Volatile Organic Compounds

a. Emission Limitations/Standards

While performing spray painting operations, the Permittee shall comply with the following requirements:

- (1) The Permittee shall not conduct or cause to be conducted any spray painting operation without minimizing organic solvent emissions. Such operations, other than architectural coating and spot painting, shall be

conducted in an enclosed area equipped with controls containing no less than 96 percent of the overspray.

[A.A.C.R18-2-727.A]

- (2) The Permittee or their designated contractor shall not either:
 - (a) Employ, apply, evaporate, or dry any architectural coating containing photochemically reactive solvents for industrial or commercial purposes; or
 - (b) Thin or dilute any architectural coating with a photochemically reactive solvent.

[A.A.C.R18-2-727.B]

- (3) For the purposes of Conditions XI.B.1.a.(2), a photochemically reactive solvent shall be any solvent with an aggregate of more than 20 percent of its total volume composed of the chemical compounds classified in Conditions XI.B.1.a.(3)(a) through XI.B.1.a.(3)(c) below, or which exceeds any of the following percentage composition limitations, referred to the total volume of solvent:

- (a) A combination of the following types of compounds having an olefinic or cyclo-olefinic type of unsaturation-hydrocarbons, alcohols, aldehydes, esters, ethers, or ketones: 5 percent.
- (b) A combination of aromatic compounds with eight or more carbon atoms to the molecule except ethylbenzene: 8 percent.
- (c) A combination of ethylbenzene, ketones having branched hydrocarbon structures, trichloroethylene or toluene: 20 percent.

[A.A.C.R18-2-727.C]

- (4) Whenever any organic solvent or any constituent of an organic solvent may be classified from its chemical structure into more than one of the groups of organic compounds described in Conditions XI.B.1.a.(3)(a) through XI.B.1.a.(3)(c) above, it shall be considered to be a member of the group having the least allowable percent of the total volume of solvents.

[A.A.C.R18-2-727.D]

b. Monitoring and Recordkeeping Requirements

- (1) Each time a spray painting project is conducted, the Permittee shall log in ink, or in an electronic format, a record of the following:
 - (a) The date the project was conducted;
 - (b) The duration of the project;
 - (c) Type of control measures employed;
 - (d) Material Safety Data Sheets for all paints and solvents used in the project; and
 - (e) The amount of paint consumed during the project.

- (2) Architectural coating and spot painting projects shall be exempt from the recordkeeping requirements of Condition XI.B.1.b.(1) above.
[A.A.C. R18-2-306.A.3.c]

c. Permit Shield

Compliance with this Part shall be deemed compliance with A.A.C.R18-2-727.
[A.A.C.R18-2-325]

2. Opacity

a. Emission Limitation/Standard

The Permittee shall not cause, allow or permit visible emissions from painting operations in excess of 20% opacity, as measured by EPA Reference Method 9.
[A.A.C. R18-2-702.B]

b. Permit Shield

Compliance with the conditions of this Part shall be deemed compliance with A.A.C.R18-2-702.B.
[A.A.C. R18-2-325]

C. Demolition/Renovation - Hazardous Air Pollutants

1. Emission Limitation/Standard

The Permittee shall comply with all of the requirements of 40 CFR 61 Subpart M (National Emissions Standards for Hazardous Air Pollutants - Asbestos).
[A.A.C. R18-2-1101.A.8]

2. Monitoring and Recordkeeping Requirement

The Permittee shall keep all required records in a file. The required records shall include the “NESHAP Notification for Renovation and Demolition Activities” form and all supporting documents.
[A.A.C. R18-2-306.A.3.c]

3. Permit Shield

Compliance with the conditions of this Part shall be deemed compliance with A.A.C. R18-2-1101.A.8.
[A.A.C. R18-2-325]

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ATTACHMENT "C": EQUIPMENT LIST

Air Quality Control Permit No. 42704

For

Apache Nitrogen Products, Inc.

Equipment	Quantity	Maximum Rated Capacity	Manufacturer	Model/Type	Serial No.	Date Installed or modified
Liquid Ammonium Nitrate Production						
LAN Plant (Neutralizer)	1	700 tons/day	Custo-O-Fab, Inc.	Reactor Vessel	04-320	2004
Neutralizer Scrubber	1	N/A	ANPI	Wet Scrubber	N/A	1992
Nitric Acid Production						
AOP-4	1	300 tons/day	Chemico	Dual Pressure Unit	N/A	1975
AOP-4 Superheater	1	5.4 MM BTU/hr	Smalling	N/A	N/A	1989
AOP-4 Cooling Tower	1	6000 gallons/min	Ecodyne	N/A	N/A	1975
AOP-3	1	160 tons/day	Jacobs Engineering	Single Pressure Unit	N/A	Modified in 1993
AOP-3 Tail Gas Catalytic Reactor	1		Enprosol	Honeycomb SCR denox catalyst	2676	2007
AOP-3 Cooling Tower	1	5600 gallons/min	Marley	N/A	N/A	1984
Ammonium Nitrate Prill Production						
FFE #3	1	352 tons/day	Struthers	N/A	TK-0195	2006
Prill Tower	1	352 tons/day	ANP	N/A	MIS-0346	Prior to 1970
Rotary Pre-dryer	1	352 tons/day	Standard Steel	N/A	DR-0186	2004
Pre-dryer Cyclones	3		ANP	N/A	0154	1972
Fluidized Bed Dryer/Cooler	1	352 tons/day	General American Transport	N/A	2824	1962
Fluidized Bed Cyclones	3		General American Transport	N/A	2824	1962
Rotex Screen	1		Rotex	42A	UP245E	1975
Coating Drum	1		Link Belt	N/A	310-12	1962
Barns 1 & 2	2	1500 tons	Star	N/A	BL-0366 BL-0367	1969 1980
3500 Conveyor	1	352 tons/day	Link Belt	3500	CN-0177	1962

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Equipment	Quantity	Maximum Rated Capacity	Manufacturer	Model/Type	Serial No.	Date Installed or modified
2500 Conveyor	1	352 tons/day	Syntron	2506	CN-0176	1972
Pre-dryer Belt	1	352 tons/day	Link Belt	N/A	CN-0673	1972
Transfer Belt	1	352 tons/day	Link Belt	N/A	CN-0504	1972
Cleated Belt	1	352 tons/day	Link Belt	N/A	CN-0003	1962
Belt to Coating Building	1	352 tons/day	Link Belt	N/A	CN-0175	1962
Elevator to Rotex Screen	1	352 tons/day	Link Belt	N/A	MIS-0190	1962
Elevator to Storage	1	352 tons/day	Link Belt	N/A	MIS-0191	1962
Belt to Barn 1	1	352 tons/day	Link Belt	N/A	CN-6002	1970
Belt to Barn 2	1	352 tons/day	Link Belt	N/A	CN-0170	1980
Ribbon Belt	1	352 tons/day	N/A	N/A	N/A	N/A
High Speed Belt	1	352 tons/day	Chantland PVS	N/A	N/A	1999
Dry Particulate NH ₄ NO ₃ Baghouse	1				MIS-0154	
Powerhouse						
Process Steam Boilers Nos. 1, 2 & 3	3	46 MM BTU/hr	Erie City Iron Works with Zurn Economizer	Natural Gas Fired	16516 (1) 16517 (2) 16518 (3)	1967
Powerhouse Cooling Towers	2	1700 gallons/min	Marley Marley	Induced draft cooling	67-1-290 156937-001 NC4221GS	1999
Electric Power Generator	1	830 HP	Caterpillar	Natural Gas Engine-driven Model G399	17220661	1998
Diesel Air Compressor	1	350 HP	COMPAIR	Diesel Engine-driven Model OFQ1500D	3427X59	2006
Brine Concentrator Plant						
Deaerator and Distillate Tank	1	70,000 lbs/hr boiler feed water	Allied Steel Production Corporation	10879	N86-4	1999
Vapor Compressor	1	600 HP	Caterpillar	Natural Gas fueled, engine-driven Model G3412 TA	7DB00941	1994

Storage Vessels for Petroleum Liquids						
Tank 1763	1	3000 gallon	TY-CO	Horizontal gasoline tank	TK-1763	~1998
Storage Vessels for NH3						
Ammonia unloading stations	5	200 tons NH3/day (2 rail cars)	ANPI	Custom Fabricated	Custom Fabricated	N/A
Tanks 90 & 91	2	60 tons	Austad Steel and Construction Company	250 psig ammonia storage tank with 250 psig relief valve	1014 (90) 1015 (91)	1958
Tanks 92 & 93	2	40 tons	Chicago Bridge and Iron	250 psig ammonia storage tank with 250 psig relief valve	S-420 (92) S-421 (93)	1960
Tank 94	1	1600 tons	Chicago Bridge and Iron	60 psig ammonia storage tank	S-599	1964
Tanks 37,38,39 & 40	4	2,500 tons each	Graver Ordinance (37/38), EMI Works (39/40)	250 psig ammonia storage tank with 250 psig relief valve	22-64-1 (37) 22-64-2 (38) H187 (39) H188 (40)	1943 (37/38) 1938 (39/40)
Miscellaneous Storage Vessels						
T-15	1	13,500 gallons	N/A	DI-AN storage	N/A	1960's
T -56	1	40 tons	Longhorn Ordinance	HNO3 storage	118214	1957
T-57	1	40 tons	Longhorn Ordinance	HNO3 storage	118219	1957
T-67	1	20,000 tons	Skinner	LAN storage	9913832	2000
T-81	1	125 tons	Trumbo	LAN storage	34747A	1984
T-82	1	150 tons	Kansas City Steel	LAN storage	N/A	1950
T-95	1	600 tons	Chicago Bridge and Iron Co.	LAN storage	9-0406	1964
T-96	1	800 tons	Allison Steel Manufacturing Co.	HNO3 storage	TK-0096	1964
T-97	1	2000 tons	Schuff Steel Co.	LAN storage	N/A	1982
T-101	1	5000 tons	GATX	LAN storage	unknown	1972
T-170	1	100 tons	N/A	LAN mix/storage	N/A	N/A
T-171	1	15 tons	N/A	LAN mix/storage	N/A	N/A
T-172	1	275 tons	Pittsburgh Des Moines	LAN storage	N/A	1963
T-173	1	275 tons	Pittsburgh Des Moines	LAN storage	2364	1963
T-174	1	50 tons	Western States	LAN/H2O storage	N/A	1990

ATTACHMENT “D”: AMMONIA EMISSIONS REDUCTION PLAN

**Air Quality Control Permit No. 42704
For
Apache Nitrogen Products, Inc.**

This ammonia emissions reduction plan was prepared in compliance with Section XII.B, Attachment “A” of Installation Permit No. 25017. The plan identifies and describes steps to be taken to reduce ammonia emissions beyond the reduction to be achieved by the installation and operation of the ammonium nitrate neutralizer scrubber. Compliance with the terms of this Attachment shall be deemed compliance with the requirement(s) of Installation Permit 25017 Condition XII.B, in effect on the date of permit issuance.

II. ANHYDROUS AMMONIA QUALITY CONTROL

[Installation Permit 25017 Condition XII.B, Operating Permit M3-1143P0-98 Attachment “C”]

- A. To assure that no out-of-specification, reclaim, or other non-standard grades of industrial anhydrous ammonia that could potentially have an adverse effect on the neutralizer/scrubber efficiency or operation are to be accepted or used, Apache’s purchasing policy and purchase order description shall incorporate language forbidding the acquisition of any ammonia except standard anhydrous commercial grade derived directly from an ammonia synthesis process.
- B. The following specific quality assurances shall be utilized:
 - 1. Vendor purity specifications shall require not less than 99.5% ammonia content, not more than 0.5% water and not more than 5 parts per million (ppm) oil.
 - 2. Rail cars used for anhydrous ammonia transport shall be dedicated to anhydrous ammonia only.
 - 3. In-plant separation of inerts shall be accomplished.

III. DESIGN CRITERIA TO MINIMIZE FUGITIVES

[Installation Permit 25017 Condition XII.B, Operating Permit M3-1143P0-98 Attachment “C”]

Replacement parts and repairs shall maintain the following criteria:

- A. In general, flanged connections and gasketed joints shall be minimized.
- B. Welded joints shall be used for hard piping in process service. Where appropriate, threaded connections shall be minimized.
- C. TIG weld shall be applied to the stainless steel piping, and stick weld to the carbon steel piping. All welding job shall be performed by an ASME certified welder and in accordance with ASME certified weld procedures.
- D. Appropriate valves shall be selected to minimize fugitive leakages.
- E. Relief valves shall be tracked on a time-in-use basis and replaced or checked per the manufacturer’s recommended schedule or applicable code requirement, whichever is more stringent.
- F. High quality and durable products such as, but not limit to, Gylon or Teflon shall be used as

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gasketing material to reduce fugitives and minimize the chance of gasket failure.

- G. Thermowells shall be required for all temperature indicators to eliminate the possibility of fugitive leakage.

IV. FUGITIVE EMISSIONS DETECTION AND CONTROL

[Installation Permit 25017 Condition XII.B, Operating Permit M3-1143P0-98 Attachment "C"]

- A. The following shall be implemented to identify fugitive emissions from all sources in the neutralizer area, including seams, joints, valves, flanges, and sensors:
 - 1. An inspection utilizing sensor instruments, supplemented by human sensory perception, shall be conducted daily during the day (A) shift. Identified leakages shall be immediately investigated to determine the source.
 - 2. Monthly, a comprehensive walk-through by Operations personnel shall be performed utilizing sensor instruments supplemented by human sensory methods for detecting leakages. Identified leakages shall be immediately investigated to determine the source.
 - 3. Quarterly, a thorough and complete tour of the neutralizer/scrubber shall be conducted by Operations and Maintenance personnel utilizing sensor instruments supplemented by human sensory analysis. Identifiable leakages shall be immediately investigated to determine the source.
 - 4. During each eight (8) hour shift, ammonia concentration shall be determined downwind of the unit, at the plant boundary, using a Sensidyne pump and appropriate indicator tubes. A reading approaching 5 ppm shall initiate an immediate investigation to locate and eliminate fugitives in the neutralizer area.
 - 5. At all times during operations, the Operator and Shift Supervisor shall continually remain alert to ammonia odors in the vicinity of the neutralizer/scrubber equipment. Should odor be detected, an investigation shall immediately be conducted to determine the source.
- B. Repairs required as identified by any of the methods described in Item A of this Section shall be performed as soon as practical. However, a reading approaching 5 ppm ammonia concentration at the plant boundary (conducted per Condition III.A.4 of this Section), shall initiate immediate repair, mitigation; should these efforts be impractical or ineffective, the equipment shall be taken off-line until the fugitive source can be eliminated or reduced to acceptable levels.
- C. On Monday-Friday day shifts, a full complement of supervisory and maintenance personnel shall be available to accomplish repairs. During other shifts, Supervisory and Operations personnel shall be sufficiently trained to deal with all but the more complex repair situations; confronted by such circumstances, personnel shall be called out to perform repairs. If necessary, repairs may be delayed to the following day shift, unless monitoring at the plant boundary indicates an ammonia concentration approaching 5 ppm, in which case the equipment shall be taken off-line pending repair.

V. RECORD KEEPING

[Installation Permit 25017 Condition XII.B, Operating Permit M3-1143P0-98 Attachment "C"]

All activities described herein and results there from shall be documented and retained for a period of five years.

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ATTACHMENT “E”

AOP-3/ -4 ABSORPTION TOWER HYDROGEN PEROXIDE INJECTION

Document Number:

AOP-0040

Revision #:

v30

Document Owner:

Director of Operations

Author:

PSM Team

Status:

Approved

Date Last Updated:

03/03/2008

General Description**Task:**

This procedure describes the steps required for operation of Hydrogen Peroxide injection into the Absorption Tower during start-ups.

Purpose:

Minimize emissions during plant startups.

Who Performs:

Operator 1
Operator 2
Operator 3
Operator 4
Operator 5

Department:

AOP-3 Nitric Acid Plant
AOP-4 Nitric Acid Plant

When to Perform:

During plant startup

Requirements**Pre-Knowledge:**

Before performing this task you must know ...

Certification in this process
Certification on job specific training
Certification on plant process overview
Certification on plant specific training

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SWP-0001 Lockout/Tagout

Definitions:

LOTO

LOTO (LockOut/TagOut) is the requirement for locking out and tagging equipment, for the safety and protection of personnel and equipment, while performing inspection, testing or repairs.

Equipment:

No special equipment/tools required.

Materials:

No special materials required

Safety & Health

Warnings:

Check eyewash/safety shower before performing procedure

Possible Chemical Burns

Possible Death or Serious Injury

Possible Inhalation Hazard

Refer to Appendix B for Chemical Properties & Hazards

The following PPE shall be worn when Operating Hydrogen Peroxide Valves or Equipment:

- Chemical goggles.
- Chemical protective (rubber) gloves.

A SCBA is required in a contaminated atmosphere.

Do NOT use cartridge type respirators.

Cautions:

Carefully inspect all equipment

Possible damage to equipment

Possible fines or penalties

Possible process plant shutdown

Possible release to the environment

Possible violation of the law

Detailed Steps

1. AOP-3

Special Warnings:

DO NOT EXCEED 1100 GALLONS OF HYDROGEN PEROXIDE. SATURATION OF THE ABSORPTION COLUMN WITH HYDROGEN PEROXIDE AND THE ADDITION OF NO_x OR NITRIC ACID CAN AND WILL CAUSE AN EXPLOSIVE MIXTURE.

IN THE EVENT OF A PLANT TRIP DURING STARTUP IT IS CRITICAL THAT THE HYDROGEN PEROXIDE BE SHUT DOWN.

FAILURE TO SHUTDOWN HYDROGEN PEROXIDE ON A TRIP OR ADDITION OF MORE THAN 1100 GALLONS OF HYDROGEN PEROXIDE CAN OVERLOAD THE ABSORPTION COLUMN AND CAUSE AN EXPLOSIVE MIXTURE.

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IF STARTUP IS DELAYED AND 1100 GALLONS OF H₂O₂ HAS BEEN ADDED, DO NOT RESET THE BATCH METER TO ADD ANY ADDITIONAL H₂O₂.

ENSURE NO_x MONITOR IS WORKING PRIOR TO LIGHT OFF BY STARTING MANUAL AUTO CAL OF NO_x MONITOR. IF THE AUTO CAL FAILS, DELAY LIGHT OFF UNTIL NO_x MONITOR IS FIXED.

IF THE NO_x MONITOR QUILTS PRIOR TO LIGHT OFF, DO NOT LIGHT THE GAUZE.
IF THE NO_x MONITOR QUILTS AFTER LIGHT OFF, CONTINUE WITH THE STARTUP.

How to Do:

A check of all equipment for LOTO, ensure all piping is together and ensure all instrumentation is operational.

1.1. Start the system:

How to Do:

1. Ensure the tank discharge valves are open.
2. Ensure the three-way valve is set for the correct tank.
3. Ensure valves CHEM-3507, -3508, & -3509 are open.
4. Ensure -3505 and -3506 are closed.
5. Open pump discharge valve:
 1. Valve CHEM-3502 & 3501 for the South pump,
OR
 2. Valve CHEM-3504 & 3503 for the North pump.
6. Select Pump to operate:
 1. Pump 1 for the South Pump,
OR
 2. Pump 2 for the North Pump.
7. Open valve CHEM-3515 at the Absorption Tower.
8. Addition:
 1. Add 300 gallons of H₂O₂ prior to lighting the gauze.
Approx. 30 minutes before LIGHT OFF
 2. Set the flow controller for 10 gpm before LIGHT off.
 3. The converter shall not be lit until verification that the proper amount of H₂O₂ (300 gallons) has been added, by reading both the H₂O₂ tank level gauge, and the batch meter, to ensure the "PRELOAD" of H₂O₂ has been added.
9. Flow Controller:
 1. Ensure flow controller is on "AUTO".
 2. Ensure flow controller is set at the 10 GPM.
NOTE: "SP" should show a number. If on "STOP", the controller is on manual.
 1. Use up or down arrows to set.
 2. Press "ENTER" to set.
10. Batch Controller:
 1. D (MENU) Then wait until the totalizer screen reads "PRESET."

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2. ENT Displays on screen old preset value from memory.
 3. CLR Clear the old value from the totalizer memory ("0" is shown on the display screen).
 4. ##### Enter the new preset value using the number buttons (new value is shown blinking on the display screen). (Input 1000 gallons for startup).
 5. ENT Saves new value to memory, and then displays on screen the old grand total.
 6. CLR Clears old grand total, replacing it with the new value on the display screen.
 7. Press "A" START when ready to begin the loadout process.
(Pump will start and flow indicated).
11. Close pump Recirculation valve:
1. CHEM-3508 for the South Pump,
OR
 2. CHEM-3509 for the North Pump.
12. After 600 gallons has been added:
1. Lower the flow controller set point to 5 GPM.
 2. Press "ENTER" to set.
13. The pump will automatically shutdown when it reaches the preset number.
14. Close valves:
1. CHEM-3502 & 3501 for the South pump,
OR
 2. CHEM-3504 & 3503 for the North Pump.
15. Open pump recirculation valve:
1. CHEM-3508 for the South Pump,
OR
 2. CHEM-3509 for the North Pump.
16. Close valve CHEM-3515 at the Absorption Tower.

If an Error Occurs:

If problems or leaks develop, push the "STOP" button on the batcher and/or "EMERGENCY STOP" on the panel.

2. AOP-4

Special Warnings:

DO NOT EXCEED 1100 GALLONS OF HYDROGEN PEROXIDE. SATURATION OF THE ABSORPTION COLUMN WITH HYDROGEN PEROXIDE AND THE ADDITION OF NO_x OR NITRIC ACID CAN AND WILL CAUSE AN EXPLOSIVE MIXTURE.

IN THE EVENT OF A PLANT TRIP DURING STARTUP IT IS CRITICAL THAT THE HYDROGEN PEROXIDE BE SHUT DOWN.

FAILURE TO SHUTDOWN HYDROGEN PEROXIDE ON A TRIP OR ADDITION OF MORE THAN 1100 GALLONS OF HYDROGEN PEROXIDE CAN OVERLOAD THE ABSORPTION COLUMN AND CAUSE AN EXPLOSIVE MIXTURE.

IF STARTUP IS DELAYED AND 1100 GALLONS OF H₂O₂ HAS BEEN ADDED, DO NOT RESET THE BATCH METER TO ADD ANY ADDITIONAL H₂O₂.

ENSURE NO_x MONITOR IS WORKING PRIOR TO LIGHT OFF BY STARTING MANUAL AUTO CAL OF

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NO_x MONITOR. IF THE AUTO CAL FAILS, DELAY LIGHT OFF UNTIL NO_x MONITOR IS FIXED.

IF THE NO_x MONITOR QUILTS PRIOR TO LIGHT OFF, DO NOT LIGHT THE GAUZE.

IF THE NO_x MONITOR QUILTS AFTER LIGHT OFF, CONTINUE WITH THE STARTUP.

How to Do:

A check of all equipment for LOTO, ensure all piping is together and ensure all instrumentation is operational.

2.1. Start the system:

How to Do:

1. Ensure the tank discharge valves are open.
2. Ensure the three-way valve is set for the correct tank.
3. Ensure valves CHEM-3505, -3506, -3507, -3508, & -3509 are open.
4. Ensure -3505 and -3506 are closed.
5. Open pump discharge valve:
 1. Valve CHEM-3502 for the South pump,
OR
 2. Valve CHEM-3504 for the North pump.
6. Select Pump to operate:
 1. Pump 1 for the South Pump,
OR
 2. Pump 2 for the North Pump.
7. Open valve CHEM-3517 at the Absorption Tower.
8. Addition:
 1. Add 600 gallons of H₂O₂ prior to lighting the gauze.
Approx. 1 hour before LIGHT off
 2. Set the flow controller for 10 GPM before LIGHT off.
 3. The converter shall not be lit until verification that the proper amount of H₂O₂ (600 gallons) has been added, by reading both the H₂O₂ tank level gauge, and the batch meter, to ensure the "PRELOAD" of H₂O₂ has been added.
9. Flow Controller:
 1. Ensure flow controller is on "AUTO".
 2. Ensure flow controller is set at the 10 GPM.
NOTE: "SP" should show a number. If on "STOP", the controller is on manual.
 1. Use up or down arrows to set.
10. Batch Controller:
 1. D (MENU) Then wait until the totalizer screen reads "PRESET."
 2. ENT Displays on screen old preset value from memory.
 3. CLR Clear the old value from the totalizer memory ("0" is shown on the display screen).
 4. ##### Enter the new preset value using the number buttons (new value is shown blinking on the display screen). (Input 1000 gallons for startup).
 5. ENT Saves new value to memory, and then displays on screen the old grand total.
 6. CLR Clears old grand total, replacing it with the new value on the display screen.

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7. Press "A" START when ready to begin the loadout process.
(Pump will start and flow indicated).
11. Close pump Recirculation valve:
 1. CHEM-3508 for the South Pump,
OR
 2. CHEM-3509 for the North Pump.
12. After 600 gallons has been added:
 1. Lower the flow controller set point to 5 GPM.
 2. Press "ENTER" to set.
13. The pump will automatically shutdown when it reaches the preset number.
14. Close valves:
 1. CHEM-3502 for the South pump,
OR
 2. CHEM-3504 for the North Pump.
15. Open pump recirculation valve:
 1. CHEM-3508 for the North Pump,
OR
 2. CHEM-3509 for the North Pump.
16. Close valve CHEM-3517 at the Absorption Tower.

If an Error Occurs:

If problems or leaks develop, push the "STOP" button on the batcher and/or "EMERGENCY STOP" on the panel.

3. RECORDKEEPING

How to Do:

Go to the AOP-3 or AOP-4 STARTUP tab on the computer.
Enter the following:

Entry	DESCRIPTION
Date of Shutdown	Enter date of shutdown
Time of Shutdown	Enter time of shutdown
Reason for the Shutdown	Enter description Examples are: Expected Maintenance, Repair, Power Outage, Operator Error, ETC> Provide detail on type of maintenance or repair, reason for power outage, nature of operator error
How Problem Was Corrected	Enter description Examples are: Inst. tech tightened wire on gauze, Inst. tech changed probe on air compressor, cooling tower fan motor replaced, etc.
Date of Startup	Enter date of startup
Startup Start Time	Enter startup time
Starting H2O2 Flowmeter Reading	Enter starting number of H2O2 you added normally 1000 gallons
Starting H2O2 Tank Level	Enter starting number of H2O2 tank level in inches

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Ending H2O2 Flowmeter reading	Enter ending number of H2O2 you added normally 0 gallons
Ending H2O2 Tank Level	Enter ending number of H2O2 tank level in inches
Volume H2O2 Added - Flowmeter	Computer calculates number
Volume H2O2 Added - Tank Level	Computer calculates number
Flowmeter vs Tank level	Computer calculates number
Startup Complete Time	Enter when startup was completed
Comments	Note any deviation from procedure and reason. If flowmeter is not functioning, provide explanation and identify corrective action.

3.1. H2O2 Startup Log:

How to Do:

1. The following data shall be entered in the "STARTUP LOG":
 - Date of shutdown
 - Time of shutdown
 - Reason for the shutdown
 - How the problem was corrected
 - Date of startup
 - Startup time
 - Starting H2O2 flowmeter reading
 - Starting H2O2 tank level
 - Ending H2O2 flowmeter reading
 - Ending H2O2 tank level
 - Volume H2O2 added - flowmeter
 - Volume H2O2 added - tank level
 - Flowmeter vs tank level
 - Startup complete time
 - Comments (if any)
2. It is the responsibility of the operator to ensure all the data required by AOP-0040 is entered into the "STARTUP LOG" and the NOx spreadsheet required by ENV-0100.
3. It is the responsibility of the Shift Supervisor to ensure the data is entered, correct and delivered to Technical Services prior to leaving the plant.

4. DELAYS DURING STARTUP (Either Plant)

How to Do:

In the case of a delayed startup after H2O2 addition has begun:

1. Press "STOP" button on the batch meter.
2. Reduce the water addition to the absorption tower to 2 gpm (this will maintain a seal without dilution of the H2O2).
3. Press the "STOP" button on the batch meter, when startup continues, to add the remaining H2O2.
4. Time restraints:
 1. If H2O2 pumping was stopped for less than one hour, the H2O2 shall be pumped for a minimum of 15 minutes before lighting the converter.
 2. If the startup was delayed for more than one hour, but less than two hours, after H2O2 began, the total amount of H2O2 shall be increased to 1100 gallons. This additional H2O2 shall be added at a rate of 10 gpm. The pump rate shall be reset to 10 gpm if it had been reduced to 5 gpm prior to the delay. After 10 minutes the

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pump rate shall be reduced to 5 gpm again.

3. If the delay after H₂O₂ addition began is over two hours the startup shall be aborted. The tower seal shall be taken off, and the tower pumped down prior to another attempt to start the plant.

NOTE: If at anytime after the H₂O₂ addition has started, the compressor shuts down, then the seal has been broken and the startup shall be aborted. The tower shall be pumped down prior to another attempt to start the plant.

5. FLOW METERS

Special Warnings:

IF THERE IS NO INDICATION OF H₂O₂ FLOW THE PLANT WILL NOT BE STARTED.

How to Do:

1. The flow control indicator on the control panel is the primary flow indication.
2. The Absorption Tower condensate flow meter is the secondary flow meter in case the primary flow meter is not functioning.
3. The H₂O₂ storage tanks level indication shall be used for final determination of the amount of H₂O₂ added.

Troubleshooting

How to get help:

Contact the Shift Supervisor

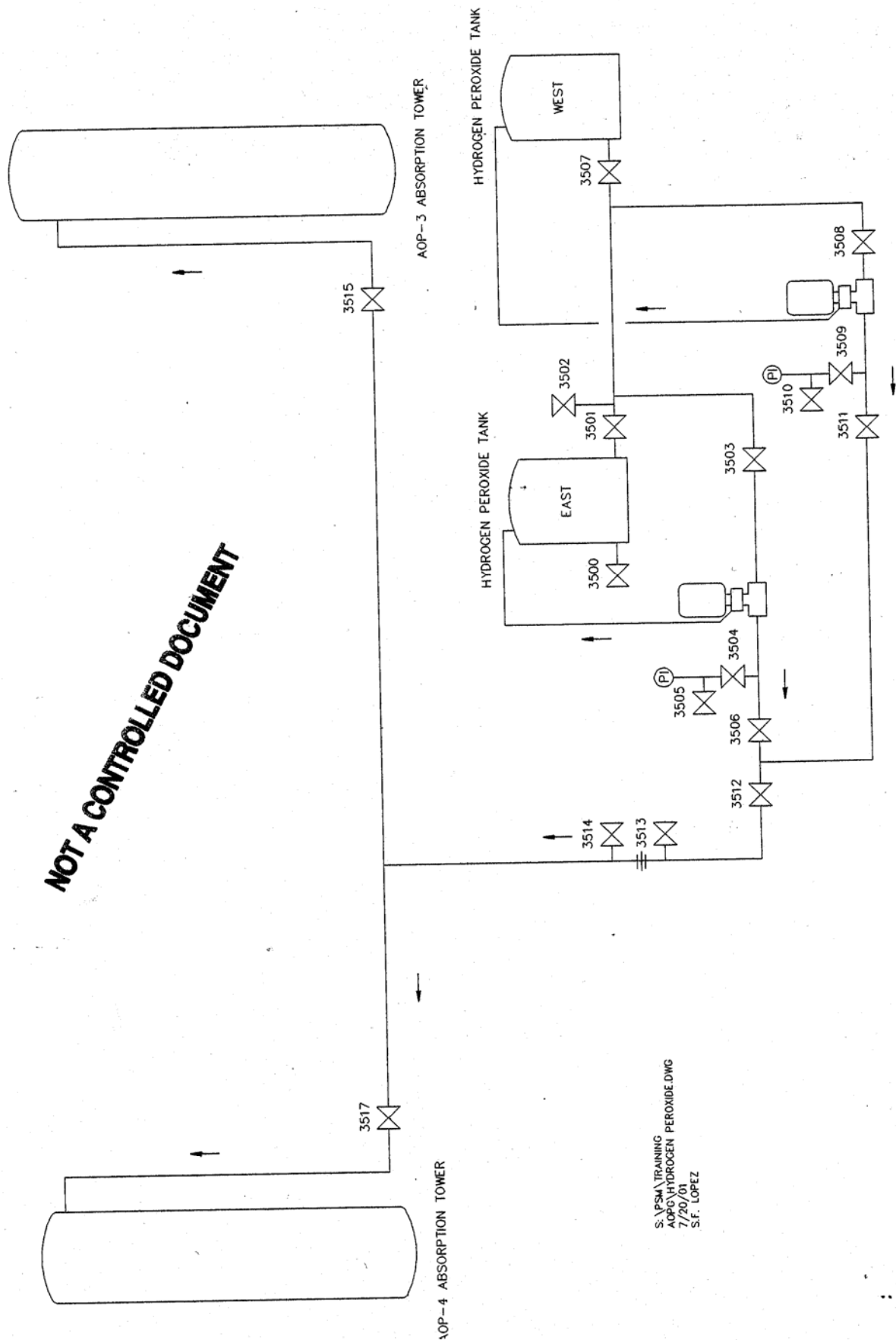
Special Notes / Appendix

APPENDIX B

SUMMARY OF CHEMICAL PROPERTIES AND HAZARDS

Refer to Appendix B in the AOP-3 or AOP-4 procedure book.

NOT A CONTROLLED DOCUMENT



S:\PSA\TRAINING
AOP-3 HYDROGEN PEROXIDE.DWG
7/20/01
S.F. LOPEZ

HYDROGEN PEROXIDE SYSTEM